# VISIX PTZ Network Camera

**VSX-PTZ-2MP-EXT20, VSX-PTZ-2MP-EXT, VX-2M-OP-PTZ20X and VX-2M-OP-PTZ30X**

## User Manual

v5.1.5_140305

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact the dealer.

This manual applies to VSX-PTZ-2MP-EXT20, VSX-PTZ-2MP-EXT, VX-2M-OP-PTZ20X and VX-2M-OP-PTZ30X 5-Inch Speed Dome PTZ network cameras.

This manual may contain technical inaccuracies or printing errors. The content is subject to change without notice. The manual will be amended if there are any hardware updates or changes.

DISCLAIMER STATEMENT

"Underwriters Laboratories Inc. ("UL") has not tested the performance or reliability of the security or signaling aspects of this product. UL has only tested for fire, shock or casualty hazards as outlined in UL's Standard(s) for Safety, UL60950-1. UL Certification does not cover the performance or reliability of the security or signaling aspects of this product. UL MAKES NO REPRESENTATIONS, WARRANTIES OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY OR SIGNALING RELATED FUNCTIONS OF THIS PRODUCT."

# Regulatory Information

**FCC Information**

**FCC compliance:** This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**FCC Conditions**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

**EU Conformity Statement**

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU.

2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

## Safety Instruction

These instructions are intended to ensure that the user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into 'Warnings' and 'Cautions':

**Warnings**: Serious injury or death may be caused if any of these warnings are neglected.

**Cautions**: Injury or equipment damage may be caused if any of these cautions are neglected.

| | |
|---|---|
| **Warnings** Follow these safeguards to prevent serious injury or death. | **Cautions** Follow these precautions to prevent potential injury or material damage. |

**Warnings:**

- Please adopt the power adapter which can meet the safety extra low voltage (SELV) standard. And source with 12 VDC or 24 VAC (depending on models) according to the IEC60950-1 and Limited Power Source standard.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)
- To reduce the risk of fire or electrical shock, do not expose this product to rain or moisture.
- This installation should be made by a qualified service person and should conform to all the local codes.
- Please install blackouts equipment into the power supply circuit for convenient supply interruption.
- Please make sure that the ceiling can support more than 50(N) Newton gravities if the camera is fixed to the ceiling.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

- **Cautions:**

- Make sure the power supply voltage is correct before using the camera.
- Do not drop the camera or subject it to physical shock.
- Do not touch sensor modules with fingers. If cleaning is necessary, use a clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period of time, put on the lens cap to protect the sensor from dirt.
- Do not aim the camera lens at the strong light such as sun or incandescent lamp. The strong light can cause fatal damage to the camera.
- The sensor may be burned out by a laser beam, so when any laser equipment is being used, make sure that the surface of the sensor not be exposed to the laser beam.
- Do not place the camera in extremely hot, cold temperatures (the operating temperature should be between -30°C ~ 60°C, or -40°C ~ 60°C if the camera model has an “H” in its suffix), dusty or damp environment, and do not expose it to high electromagnetic radiation.
- To avoid heat accumulation, good ventilation is required for a proper operating environment.
- Keep the camera away from water and any liquid.
- While shipping, the camera should be packed in its original packing.
- Improper use or replacement of the battery may result in hazard of explosion. Please use the manufacturer recommended battery type.

***Notes:***

For cameras that support IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make certain the installation location does not have reflective surfaces of objects too close to the camera. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

# Table of Contents

**1 SYSTEM REQUIREMENT ..... 1**

**1.1** FUNCTIONS ..... 1

**2 NETWORK CONNECTION ..... 3**

**2.1** SETTING THE NETWORK CAMERA OVER THE LAN ..... 3

*Wiring over the LAN ..... 3*

*Detecting and Changing the IP Address ..... 4*

**2.2** SETTING THE NETWORK CAMERA OVER THE WAN ..... 5

*Static IP Connection ..... 5*

*Dynamic IP Connection ..... 5*

*Normal Domain Name Resolution ..... 6*

*Private Domain Name Resolution ..... 7*

**3 ACCESS TO THE NETWORK SPEED DOME ..... 8**

**3.1** ACCESSING BY WEB BROWSERS ..... 8

**4 LIVE VIEW ..... 10**

**4.1** POWER-UP ACTION ..... 10

**4.2** LIVE VIEW PAGE ..... 10

**4.3** STARTING LIVE VIEW ..... 11

**4.4** RECORDING AND CAPTURING PICTURES MANUALLY ..... 13

**4.5** OPERATING PTZ CONTROL ..... 13

*PTZ Control Panel ..... 13*

*Setting / Calling a Preset ..... 13*

*Setting / Calling a Patrol ..... 16*

*Setting / Calling a Pattern ..... 17*

**4.6** CONFIGURING LIVE VIEW PARAMETERS ..... 18

**5 PTZ CONFIGURATION ..... 19**

**5.1** CONFIGURING INITIAL POSITION ..... 19

**5.2** CONFIGURING BASIC PTZ PARAMETERS ..... 19

**5.3** CONFIGURING PTZ LIMIT STOPS ..... 21

**5.4** CONFIGURING SCHEDULED TASKS ..... 21

**5.5** CONFIGURING PARK ACTIONS ..... 23

**5.6** CONFIGURING PRIVACY MASK ..... 24

**5.7** CONFIGURING SMART TRACKING ..... 25

**5.8** CONFIGURING PTZ CONTROL PRIORITY ..... 26

**5.9** CLEARING PTZ CONFIGURATIONS ..... 26

**6 SPEED DOME CONFIGURATION ..... 27**

**6.1** CONFIGURING LOCAL PARAMETERS ..... 27

**6.2** CONFIGURING TIME SETTINGS ..... 28

*Configuring Time Synchronization by NTP Server* ..... *29*
*Configuring Time Synchronization Manually* ..... *30*
*Select the Time Zone* ..... *30*
*Configuring Daylight Saving Time (summer time)* ..... *30*
**6.3** CONFIGURING NETWORK SETTINGS ..... 31
*Configuring TCP/IP Settings* ..... *31*
*Configuring Port Settings* ..... *32*
*Configuring PPPoE Settings* ..... *33*
*Configuring DDNS Settings* ..... *33*
*Configuring SNMP Settings* ..... *35*
*Configuring 802.1X Settings* ..... *36*
*Configuring QoS Settings* ..... *38*
*Configuring FTP Settings* ..... *38*
*Configuring UPnP™ Settings* ..... *40*
*Configuring NAT (Network Address Translation) Settings* ..... *40*
*Configuring Email Settings* ..... *41*
**6.4** CONFIGURING VIDEO AND AUDIO SETTINGS ..... 43
*Configuring Video Settings* ..... *43*
*Configuring Audio Settings* ..... *44*
*Configuring ROI Settings* ..... *44*
**6.5** CONFIGURING IMAGE SETTINGS ..... 45
*Configuring Display Settings* ..... *45*
*Configuring OSD Settings* ..... *50*
*Configuring Text Overlay Settings* ..... *52*
**6.6** CONFIGURING AND HANDLING ALARMS ..... 52
*Configuring Motion Detection* ..... *52*
*Configuring Video Loss Alarm* ..... *56*
*Configuring Video Tampering Alarm* ..... *56*
*Configuring External Alarm Input* ..... *57*
*Configuring Alarm Output* ..... *59*
*Handling Exception* ..... *60*
*Detecting Audio Exception* ..... *61*

**7 RECORD SETTINGS** ..... **63**

**7.1** CONFIGURING NAS SETTINGS ..... 63
**7.2** CONFIGURING RECORDING SCHEDULE ..... 64
**7.3** CONFIGURING SNAPSHOT SETTINGS ..... 67
*Uploading to FTP* ..... *68*

**8 PLAYBACK** ..... **70**

**9 LOG SEARCHING** ..... **74**

**10 OTHERS** ..... **75**

**10.1** MANAGING USER ACCOUNTS ..... 75
**10.2** CONFIGURING RTSP AUTHENTICATION ..... 77

**10.3** CONFIGURING ANONYMOUS VISIT ..... 78
**10.4** CONFIGURING IP ADDRESS FILTER ..... 78
**10.5** VIEWING DEVICE INFORMATION ..... 79
**10.6** MAINTENANCE ..... 79
*Rebooting the Speed Dome* ..... *79*
*Restoring Default Settings* ..... *80*
*Importing/Exporting Configuration File* ..... *80*
*Upgrading the System* ..... *81*
*Enabling Telnet Function* ..... *81*
**10.7** RS-485 SETTINGS ..... 81

# 1 System Requirement

System requirement of web browser accessing is as follows:

**Operating System:** Microsoft Windows XP SP1 and above version / Vista / Win7 / Server 2003 / Server 2008 32bits

**CPU:** Intel Pentium IV 3.0 GHz or higher

**RAM:** 1G or higher

**Display:** 1024×768 resolution or higher

**Web Browser:** Internet Explorer 7.0 and newer versions, Apple Safari 5.02 and newer versions, Mozilla Firefox 5 and newer versions and Google Chrome8 and newer versions.

## 1.1 Functions

**NOTE:** The functions vary depending on the models of speed dome.

- **Limit Stops -** The dome can be programmed to move within the limit stops (left/right, up/down).
- **Scan Modes -** The dome provides 5 scan modes: auto scan, tilt scan, frame scan, random scan and panorama scan.
- **Preset Freezing -** This feature freezes the scene on the monitor when the dome is moving to a preset. This allows for smooth transition from one preset scene to another. It also guarantees that masked area will not be revealed when the dome is moving to a preset.
- **Presets -** A preset is a predefined image position. When the preset is called, the dome will automatically move to the defined position. The presets can be added, modified, deleted and called.
- **Label Display -** The on-screen label of the preset title, azimuth/elevation, zoom, time and dome name can be displayed on the monitor. The displays of time and speed dome name can be programmed.
- **Auto Flips -** In manual tracking mode, when a target object goes directly beneath the dome, the video will automatically flips 180 degrees in horizontal direction to maintain continuity of tracking. This function can also be realized by auto mirror image depending on different camera models.
- **Privacy Mask -** This function allows you to block or mask certain area of a scene, for preventing the personal privacy from recording or live viewing. A masked area will move with pan and tilt functions and automatically adjust in size as the lens zooms telephoto and wide.
- **3D Positioning -** In the client software, use the left key of mouse to click on the desired position in the video image and drag a rectangle area in the lower right direction, then the dome system will move the position to the center and allow the rectangle area to zoom in. Use the left key of mouse to drag a rectangle area in the upper left direction to move the position to the center and allow the rectangle area to zoom out.
- **Proportional Pan/Tilt -** Proportional pan/tilt automatically reduces or increases the pan and tilt speeds according to the amount of zoom. At telephoto zoom settings, the pan and tilt speeds will be slower than at wide zoom settings. This keeps the image from moving too fast on the live view image when there is a large amount of zoom.

- **Auto Focus -** The auto focus enables the camera to focus automatically to maintain clear video images.
- **Day/Night Auto Switch -** The speed domes deliver color images during the day. And as light diminishes at night, the speed domes switch to night mode and deliver black and white images with high quality.
- **Slow Shutter -** In slow shutter mode, the shutter speed will automatically slow in low illumination conditions to maintain clear video images by extending the exposure time. The feature can be enabled or disabled.
- **Backlight Compensation (BLC) -** If you focus on an object against strong backlight, the object will be too dark to be seen clearly. The BLC (Backlight Compensation) function can compensate light to the object in the front to make it clear, but this causes the over-exposure of the background where the light is strong.
- **Wide Dynamic Range (WDR) -** The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, WDR balances the brightness level of the whole image and provide clear images with details.

  **NOTE:** This feature varies depending on speed dome models.
- **White Balance (WB) -** White balance can remove the unrealistic color casts. White balance is the white rendition function of the camera to adjust the color temperature according to the environment automatically.
- **Patrol -** A patrol is a memorized series of pre-defined preset function. The scanning speed between two presets and the dwell time at the preset are programmable.
- **Pattern -** A pattern is a memorized series of pan, tilt, zoom, and preset functions. By default the focus and iris are in auto status during the pattern is being memorized.
- **Power Off Memory -** The dome supports the power off memory capability with the predefined resume time. It allows the dome to resume its previous position after power is restored.
- **Scheduled Task -** A time task is a preconfigured action that can be performed automatically at a specific date and time. The programmable actions include: auto scan, random scan, patrol 1-8 ,pattern 1-4, preset 1-8,frame scan, panorama scan, tilt scan, day, night, reboot, PT adjust, Aux Output, etc.
- **Park Action** - This feature allows the dome to start a predefined action automatically after a period of inactivity.
- **User Management -** The dome allows you to edit users with different levels of permission, in the admin login status. Multiple users are allowed to access and control the same network speed dome via network simultaneously.
- **3D Digital Noise Reduction -** Comparing with the general 2D digital noise reduction, the 3D digital noise reduction function processes the noise between two frames aside from processing the noise in one frame. The noise will be reduced and the video will be clearer.

# 2 Network Connection

***Before you start:***

- If you want to set the network camera via a LAN (Local Area Network), please refer to *Section 2.1* ***Setting the Network Camera over the LAN***.
- If you want to set the network camera via a WAN (Wide Area Network), please refer to *Section 2.2* ***Setting the Network Camera over the WAN***.
  -

## 2.1 Setting the Network Camera over the LAN

***Purpose:***

To view and configure the camera via a LAN, you need to connect the network camera in the same subnet with your computer, and install the 3xLOGIC VISIX detection software. This will allow you to search and change the IP address of the detected network cameras.

**NOTE:** For the detailed introduction of the 3xLOGIC VISIX camera detection software, please refer to this link: http://www.3xlogic.com/3xdocuments/kb-article/130005-1-guide-visix-setup-utility-guide

### WIRING OVER THE LAN

The following figures show the two methods of cable connection between a network camera and a computer:

***Purpose:***

- To test the network camera, you can directly connect the network camera to the computer with a network cable as shown in Figure 2-1.
- Refer to the Figure 2-2 to set network camera over the LAN via a switch or a router.

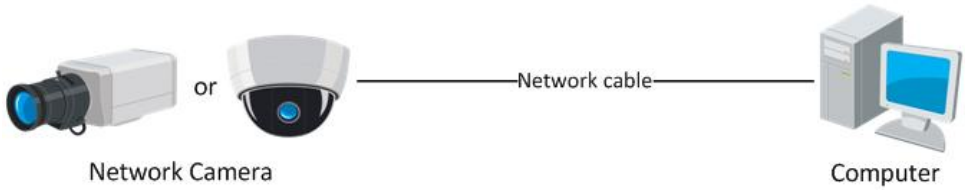



Figure 2-1 *Connecting Directly*

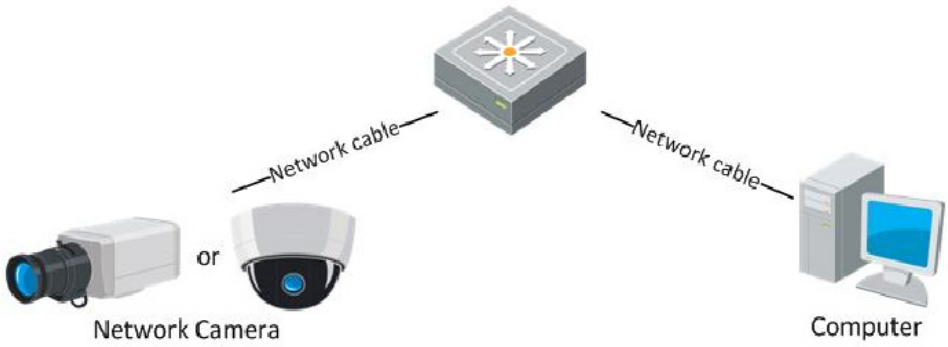



Figure 2-2 *Connecting via a Switch or a Router*

## DETECTING AND CHANGING THE IP ADDRESS

You need the camera IP address to connect to the network camera.

***Steps:***

1) To get the IP address, the 3xLOGIC VISIX setup utility, a software tool which can automatically detect the online network cameras in the LAN and list the device information including IP address, subnet mask, port number, device serial number, device version, etc., shown in Figure 2-3.
2) Change the IP address and subnet mask to the same subnet as that of your computer.
3) Enter the IP address of network camera in the address field of the web browser to view the live video.

**Note:**

- The default IP address is 192.0.0.64 and the port number is 8000. The default user name is admin, and password is 12345.
- For accessing the network camera from different subnets, please set the gateway for the network camera after you logged in. For detailed information, please refer to *Section 5.3.1* ***Configuring TCP/IP Settings***.

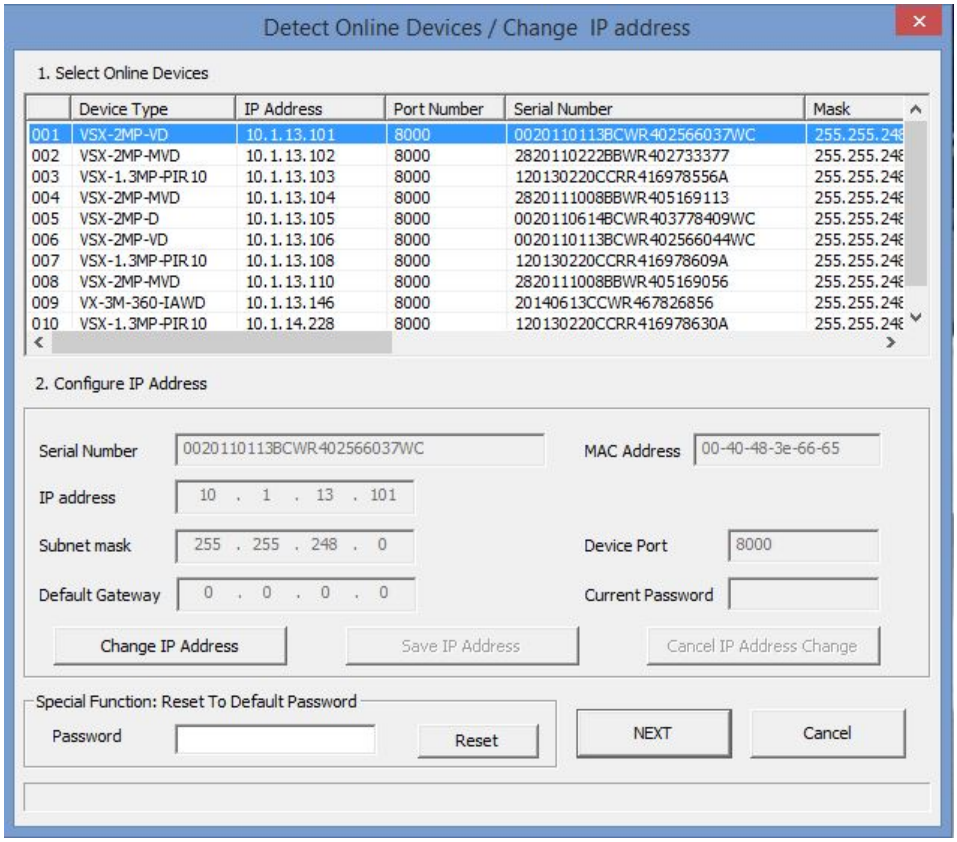



Figure 2-3 *: 3xLOGIC VISIX detection utility*

## 2.2 Setting the Network Camera over the WAN

***Purpose:***

This section explains how to connect the network camera to the WAN with a static IP or a dynamic IP.

### STATIC IP CONNECTION

***Before you start:***

Please apply a static IP from an ISP (Internet Service Provider). With the static IP address, you can connect the network camera via a router or connect it to the WAN directly.

- **Connecting the network camera via a router**

***Steps:***

1) Connect the network camera to the router.
2) Assign a LAN IP address, the subnet mask and the gateway. Refer to *Section 2.1.2* ***Detecting and Changing the IP Address*** for detailed IP address configuration of the camera.
3) Save the static IP in the router.
4) Set port mapping, e.g., 80, 8000, and 554 ports. The steps for port mapping vary according to the different routers. Please call the router manufacturer for assistance with port mapping.
   **Note:** Refer to Appendix 2 for detailed information about port mapping.
5) Visit the network camera through a web browser or the client software over the internet.

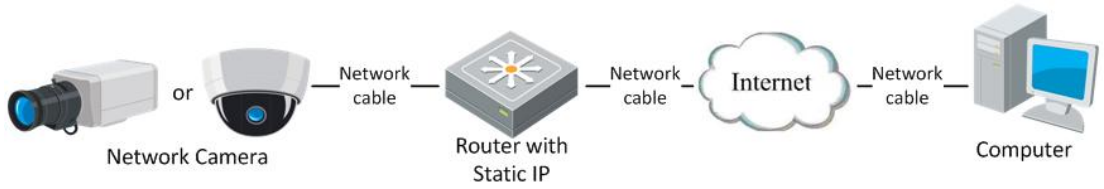



Figure 2-4 *Accessing the Camera through Router with Static IP*

- **Connecting the network camera with static IP directly**

You can also save the static IP in the camera and directly connect it to the internet without using a router. Refer to *Section 2.1.2* ***Detecting and Changing the IP Address*** for detailed IP address configuration of the camera.

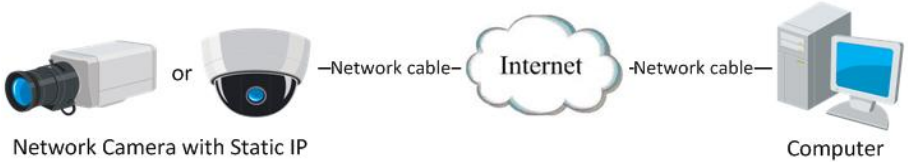



Figure 2-5 *Accessing the Camera with Static IP Directly*

### DYNAMIC IP CONNECTION

***Before you start:***

Please apply a dynamic IP from an ISP. With the dynamic IP address, you can connect the network camera to a modem or a router.

- Connecting the network camera via a router

***Steps:***

1) Connect the network camera to the router.

2) In the camera, assign a LAN IP address, the subnet mask and the gateway. Refer to *Section 2.1.2* ***Detecting and Changing the IP Address*** for detailed LAN configuration.
3) In the router, set the PPPoE user name, password and confirm the password.
4) Set port mapping. E.g. 80, 8000, and 554 ports. The steps for port mapping vary depending on different routers. Please call the router manufacturer for assistance with port mapping.
   **NOTE:** Refer to Appendix 2 for detailed information about port mapping.
5) Apply a domain name from a domain name provider.
6) Configure the DDNS settings in the setting interface of the router.
7) Visit the camera via the applied domain name.

- Connecting the network camera via a modem

***Purpose:***

This camera supports the PPPoE auto dial-up function. The camera gets a public IP address by ADSL dial-up after the camera is connected to a modem. You need to configure the PPPoE parameters of the network camera. Refer to *Section 5.3.3* ***Configuring PPPoE Settings*** for detailed configuration.

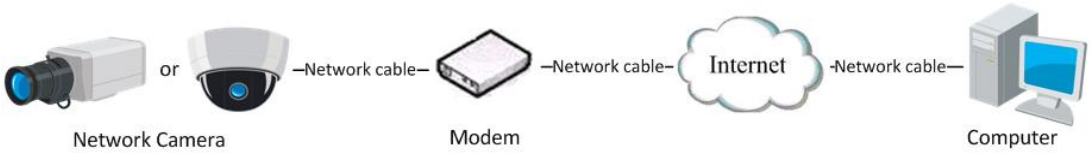



Figure 2-6 *Accessing the Camera with Dynamic IP*

**NOTE:** The obtained IP address is dynamically assigned via PPPoE, so the IP address always changes after rebooting the camera. To solve the inconvenience of the dynamic IP, you need to get a domain name from the DDNS provider (E.g. DynDns.com). Please follow the steps below for normal domain name resolution and private domain name resolution to solve the problem.

### NORMAL DOMAIN NAME RESOLUTION

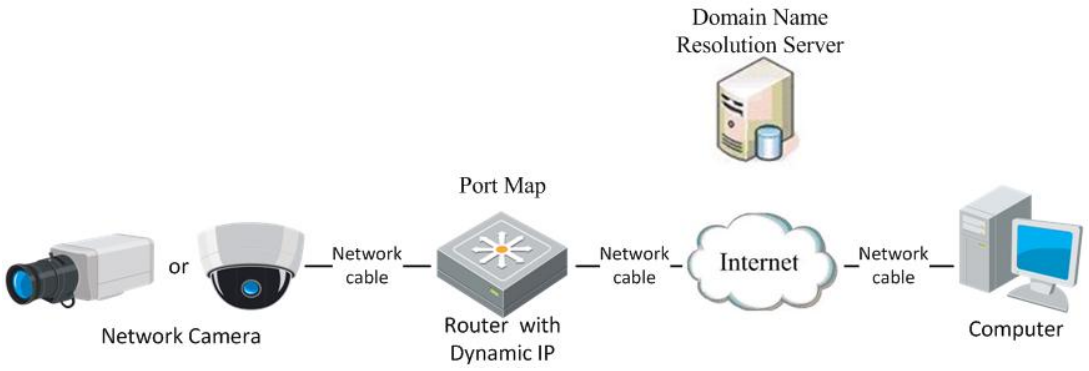



Figure 2-7 *Normal Domain Name Resolution*

***Steps:***

1) Apply a domain name from a domain name provider.
2) Configure the DDNS settings in the **DDNS Settings** interface of the network camera. Refer to *Section 5.3.4* ***Configuring DDNS Settings*** for detailed configuration.

3) Visit the camera via the applied domain name.

### PRIVATE DOMAIN NAME RESOLUTION

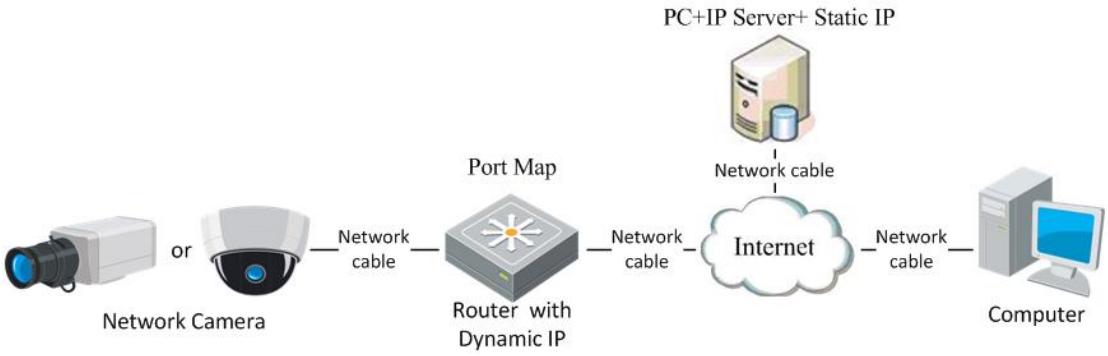



Figure 2-8 *Private Domain Name Resolution*

***Steps:***

1) Install and run the IP Server software in a computer with a static IP.
2) Access the network camera through the LAN with a web browser or the client software.
3) Enable DDNS and select IP Server as the protocol type. Refer to *Section 5.3.4* ***Configuring DDNS Settings*** for detailed configuration.

# 3 Access to the Network Speed Dome

## 3.1 Accessing by Web Browsers

***Steps:***

1) Open the web browser.
2) In the address field, input the IP address of the network speed dome, e.g., 192.0.0.64 and press the **Enter** key to enter the login interface.
3) Select English as the interface language on the top-right of login interface.
4) Input the user name and password and click Login.

   **NOTE:** The default user name is admin, password is 12345.

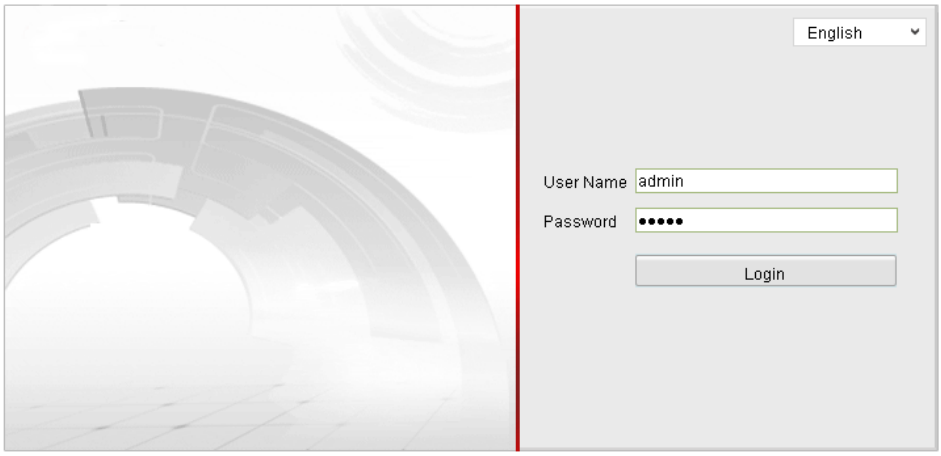



Figure 3-1 *Login Interface*

5) Install the plug-in before viewing the live video and operating the speed dome. Please follow the installation prompts to install the plug-in.

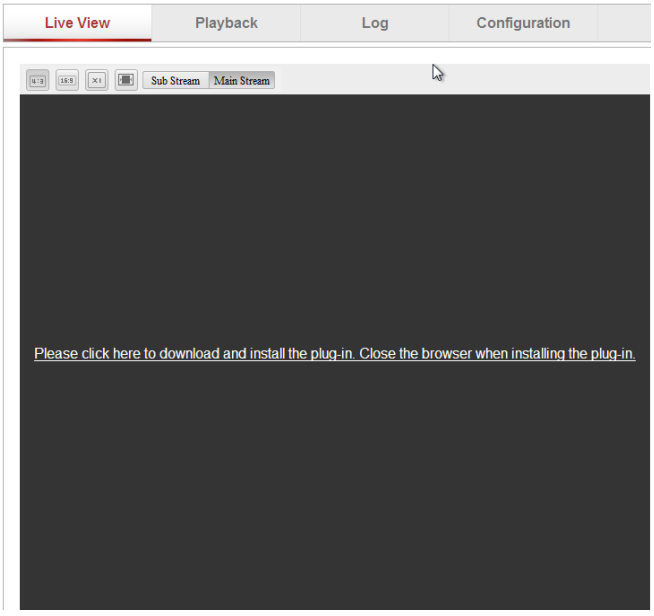



Figure 3-2 *Download and Install Plug-in*

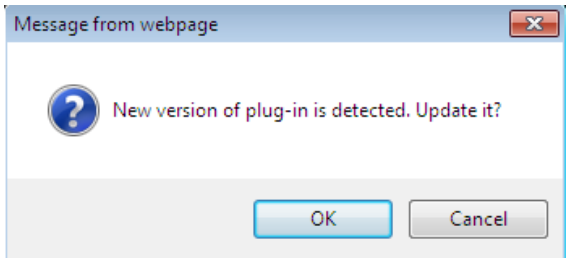



Figure 3-3 *Install Plug-in (1)*

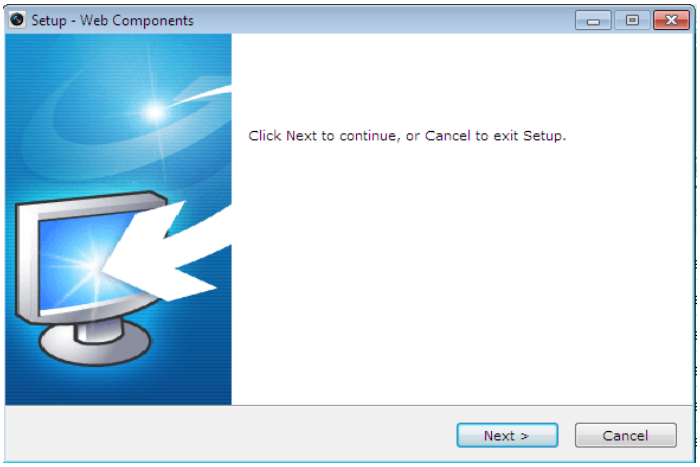



Figure 3-4 *Install Plug-in (2)*

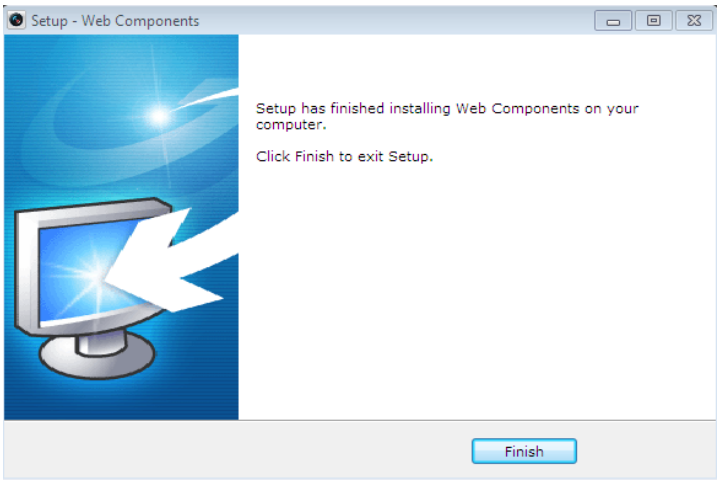



Figure 3-5 *Install Plug-in (3)*

**NOTE:** You may have to close the web browser to install the plug-in. Please reopen the web browser and log in again after installing the plug-in.

# 4 Live View

## 4.1 Power-up Action

After the power is applied, the speed dome will perform self-test actions. It begins with lens actions and then pan and tilt movement. After the power-up self-test actions, the information as shown in Figure 4-1 will be displayed on screen for 40 seconds.

The System Information displayed on the screen includes the dome model, address, protocol, version and other information. The COMMUNICATION refers to the baud rate, parity, data bit and stop bit of the dome. e.g., “2400, N, 8, 1” indicates the dome is configured with the baud rate of 2400, no parity, 8 data bits and 1 stop bit.

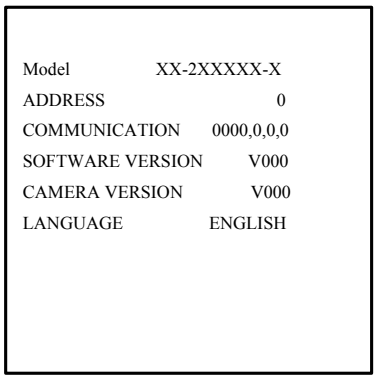



Figure 4-1 *Power-up information*

## 4.2 Live View Page

***Purpose:***

The live video page allows you to view live video, capture images, realize PTZ control, set/call presets and configure video parameters.

Log in the network speed dome to enter the live view page, or you can click

on the menu bar of the main page to enter the live view page.

**Descriptions of the live view page:**

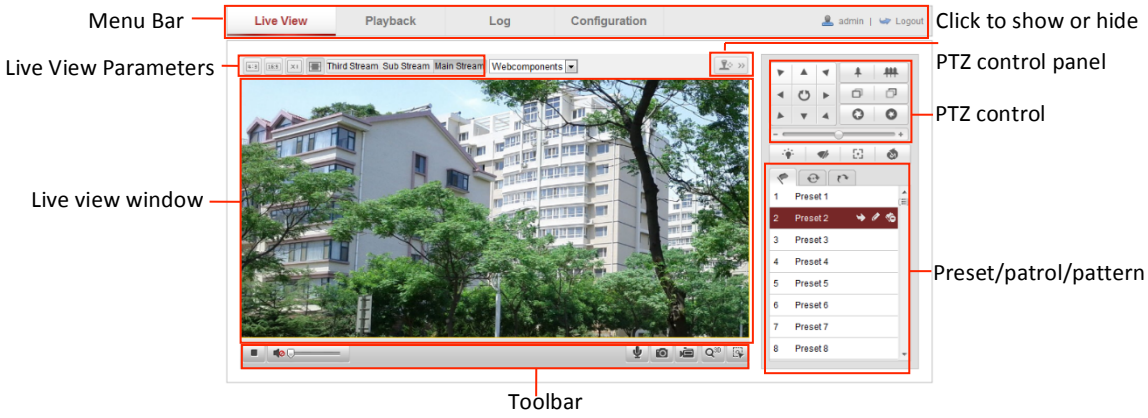



Figure 4-2 *Live View Page*

**Menu Bar:**

Click each tab to enter Live View, Playback, Log and Configuration page respectively.

**Live View Window:**

Display the live video.

**Toolbar:**

Operations on the live view page, e.g., live view, capture, record, audio on/off, two-way audio, etc.

**PTZ Control:**

Panning, tilting, focusing and zooming actions of the speed dome. The lighter, wiper, one-touch focus and lens initialization control.

**Preset/patrol/pattern:**

Set and call the preset/patrol/pattern for the speed dome.

**Live View Parameters:**

Configure the image size and stream type of the live video.

## 4.3 Starting Live View

In the live view window as shown in Figure 4-3, click on the toolbar to start the live view of the speed dome.

Figure 4-3 *Start Live View*

Descriptions of the Toolbar

| Icon | Description | Icon | Description |
|---|---|---|---|
| | Live view on | | Live view off |
| | Manually capture the pictures | | |
| | Manual recording off | | Manual recording on |
| | Audio on and adjust volume | | Mute |
| | Two-way audio off | | Two-way audio on |
| | 3D zoom | | Manual tracking |

**NOTE:** Before using the two-way audio or recording with audio functions, please set the **Stream Type** to **Video & Audio** referring to Section ***6.4.1 Configuring Video Settings***.

**Full-screen Mode:**

You can double-click on the live video to switch the current live view into full-screen or return to normal mode from the full-screen.

**3D Positioning:**

***Steps:***

1) Click on the tool bar of live view interface.
2) Operate the 3D positioning function:
   - Left click a position of the live video. The corresponding position will be moved to the center of the live video.
   - Hold down the left mouse button and drag the mouse to the lower right on the live video. The corresponding position will be moved to the center of the live video and zoomed in.
   - Hold down the left mouse button and drag the mouse to the upper left on the live video. The corresponding position will be moved to the center of the live video and zoomed out.

**Manual Tracking:**

***Before you start:***

Please enter the Smart Tracking settings interface and enable smart tracking first.

**Configuration > Advanced Configuration> PTZ > Smart Tracking**

***Steps:***

1) Click on the tool bar of live view interface.
2) Left click a moving object in the live video.

The speed dome will track the object automatically.

**NOTE:** Not all the speed dome models support this function. Please take the browser interface of the actual product as standard.

Please refer to the following sections for more information:

- Configuring remote recording in Section ***7.2 Configuring Recording Schedule***.
- Setting the image quality of the live video in Section ***6.1 Configuring Local Parameters*** and Section ***6.4.1 Configuring Video Settings***.
- Setting the OSD text on live video in Section ***6.5.2 Configuring OSD Settings***.

## 4.4 Recording and Capturing Pictures Manually

In the live view interface, click on the toolbar to capture the live pictures or click to record the live video. The local saving paths of the captured pictures and clips can be set in the **Configuration > Local Configuration** interface.

To configure remote automatic recording, please refer to Section ***7.2 Configuring Recording Schedule***.

**NOTE:** The captured image will be saved as a JPEG file in your computer.

## 4.5 Operating PTZ Control

***Purpose:***

In the live view interface, you can use the PTZ control buttons to control panning, tilting and zooming.

### PTZ CONTROL PANEL

On the live view page, click to show the PTZ control panel or click to hide it.

Click the direction buttons to control the pan/tilt movements.

Click the zoom/iris/focus buttons to realize lens control.

Figure 4-4 *PTZ Control Panel*

Descriptions of PTZ Control Panel

| Button | Description |
|---|---|
| | Zoom in/out |
| | Focus near/far |
| | Iris +/- |
| | Adjust speed of pan/tilt movements |

### SETTING / CALLING A PRESET

***Purpose:***

A preset is a predefined image position. For the defined preset, you can click the calling button to quickly view the desired image position.

- **Setting a Preset:**

***Steps:***

1) In the PTZ control panel, select a preset number from the preset list.

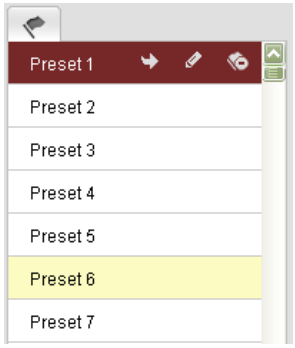



Figure 4-5 *Setting a Preset*

2) Use the PTZ control buttons to move the lens to the desired position.
   - Pan the speed dome to the right or left.
   - Tilt the speed dome up or down.
   - Zoom in or out.
   - Refocus the lens.
3) Click to finish the setting of the current preset.
4) You can click to delete the preset.

   **NOTE:** You can configure up to 256 presets.

- **Calling a Preset:**

***In the PTZ control panel, select a defined preset from the list and click to call the preset.***

Figure 4-6 *Calling a Preset*

For convenient preset selection, refer to the following steps to navigate to the preset you want.

***Steps:***

6) Select any preset from the list.
7) Click the preset number you need on the keyboard.

**NOTE:** The following presets are predefined with special commands. You can only call them but not configure them. For instance, preset 99 is the "Start auto scan". If you call the preset 99, the speed dome starts auto scan function.

Special Presets

| Special Preset | Function | Special Preset | Function |
|---|---|---|---|
| 33 | Auto flip | 93 | Set limit stops manually |
| 34 | Back to initial position | 94 | Remote reboot |
| 35 | Call patrol 1 | 95 | Call OSD menu |
| 36 | Call patrol 2 | 96 | Stop a scan |
| 37 | Call patrol 3 | 97 | Start random scan |
| 38 | Call patrol 4 | 98 | Start frame scan |
| 39 | IR cut filter in | 99 | Start auto scan |
| 40 | IR cut filter out | 100 | Start tilt scan |
| 41 | Call pattern 1 | 101 | Start panorama scan |
| 42 | Call pattern 2 | 102 | Call patrol 5 |
| 43 | Call pattern 3 | 103 | Call patrol 6 |
| 44 | Call pattern 4 | 104 | Call patrol 7 |
| 92 | Start to set limit stops | 105 | Call patrol 8 |

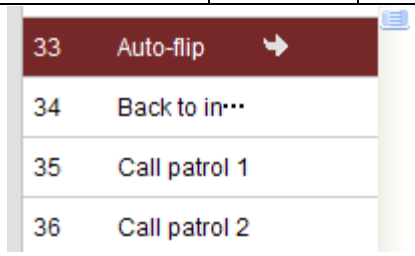



Figure 4-7 *Special Preset*

**NOTE:** You may need to use the OSD(On Screen Display) menu when controlling the speed dome remotely. To display the OSD menu on the live view screen, you can call the preset number 95.

### SETTING / CALLING A PATROL

***Purpose:***

A patrol is a memorized series of preset function. It can be configured and called on the patrol settings interface. There are up to 8 patrols for customizing. A patrol can be configured with 32 presets.

***Before you start:***

Please make sure that the presets you want to add into a patrol have been defined.

- **Setting a Patrol:**

***Steps:***

1) In the PTZ control panel, click to enter the patrol settings interface.

2) Select a patrol number from .

3) Click to enter the adding interface of preset as shown in Figure 4-8.

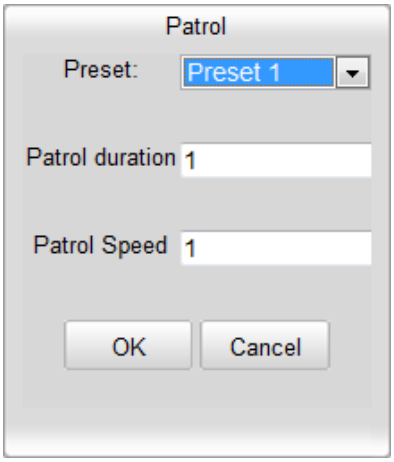
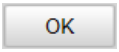



Figure 4-8 *Adding Presets*

4) Configure the preset number, patrol time and patrol speed.

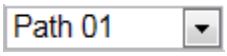
| Name | Description |
|---|---|
| Patrol Time | It is the duration staying on one patrol point. The speed dome moves to another patrol point after the patrol time. |
| Patrol Speed | It is the speed of moving from one preset to another. |

5) Click  to save a preset into the patrol.

6) Repeat the steps from 3 to 5 to add more presets.

7) Click to save all the patrol settings.

- **Calling a Patrol:**

***In the PTZ control panel, select a defined patrol from***  ***and click***  ***to call the patrol as shown in Figure 4-9.***

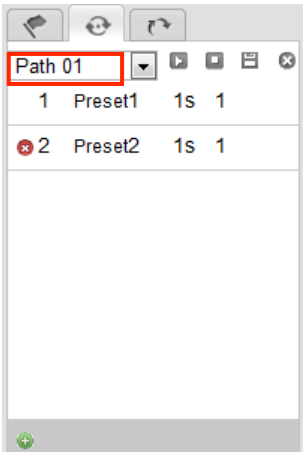



Figure 4-9 *Calling a Preset*

- **Buttons on the Patrols interface:**

| Buttons | Description |
|---|---|
| | Save a patrol |
| | Call a patrol |
| | Stop a patrol |
| | Enter the adding interface of preset |
| | Modify a preset |
| | Delete a preset |
| | Delete all the presets in one patrol |

### SETTING / CALLING A PATTERN

***Purpose:***

A pattern is a memorized series of pan, tilt, zoom, and preset functions. It can be called on the pattern settings interface. There are up to 4 patterns for customizing.

- **Setting a Pattern:**

***Steps:***

1) In the PTZ control panel, click to enter the pattern settings interface.
2) Select a pattern number from the list as shown in Figure 4-10.

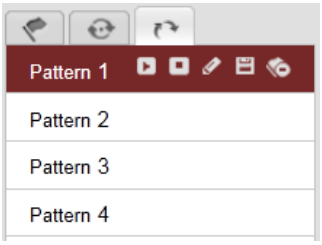



Figure 4-10 *Patterns Settings Interface*

3) Click to enable recording the panning, tilting and zooming actions.

4) Use the PTZ control buttons to move the lens to the desired position after the information of **PROGRAM PATTERN REMAINNING MENORY(%)** is displayed on the screen.
   - Pan the speed dome to the right or left.
   - Tilt the speed dome up or down.
   - Zoom in or out.
   - Refocus the lens.

5) Click to save all the pattern settings.

- **Buttons on the Patterns interface:**

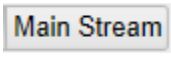
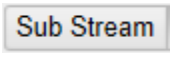
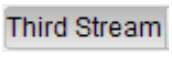
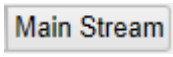
| Buttons | Description |
|---|---|
| | Start to record a pattern. |
| | Stop recording a pattern. |
| | Call the current pattern. |
| | Stop the current pattern. |
| | Delete the current pattern. |

**NOTE:**

- These 4 patterns can be operated separately and with no priority level.
- When configuring and calling the pattern, proportional pan is valid; the limit stops and auto flip will be invalid; and the 3D positioning operation is not supported.

## 4.6 Configuring Live View Parameters

- **Main stream/Sub-stream/Third stream:**

You can select  ,  or  as the stream type of live viewing. The main stream is with a relatively high resolution and needs much bandwidth. The sub-stream is with a low resolution and needs less bandwidth. The resolution of third stream is between that of main stream and sub stream. The default setting of stream type is  .

**NOTE:** Please refer to Section ***6.4.1 Configuring Video Settings*** for more detailed parameter settings of the main stream and sub-stream respectively.

- **Image Size:**

You can scale up/down the live view image by clicking . the image size can be 4:3, 16:9, original or auto.

# 5 PTZ Configuration

## 5.1 Configuring Initial Position

***Purpose:***

The initial position is the origin of PTZ coordinates. It can be the factory default initial position. You can also customize the initial position according to your own demand.

- **Customize an Initial Position:**

***Steps:***

1) Enter the Initial Position Configuration interface:
**Configuration** > **Advanced Configuration** > **PTZ** > **Initial Position**

Figure 5-1 *PTZ Configuration*

2) Click the PTZ control buttons to find a position as the initial position of the dome; you can also call a defined preset and set it as the initial position of the dome.
3) Click **Set** to save the position.

- **Call/Delete an Initial Position:**

You can click Goto to call the initial position. You can click Clear to delete the initial position and restore the factory default initial position.

## 5.2 Configuring Basic PTZ Parameters

***Purpose:***

You can configure the basic PTZ parameters, including proportional pan, preset freezing, preset speed, etc.

1) Enter the Basic PTZ Parameter Configuration interface:
**Configuration** > **Advanced Configuration** > **PTZ** > **Basic**

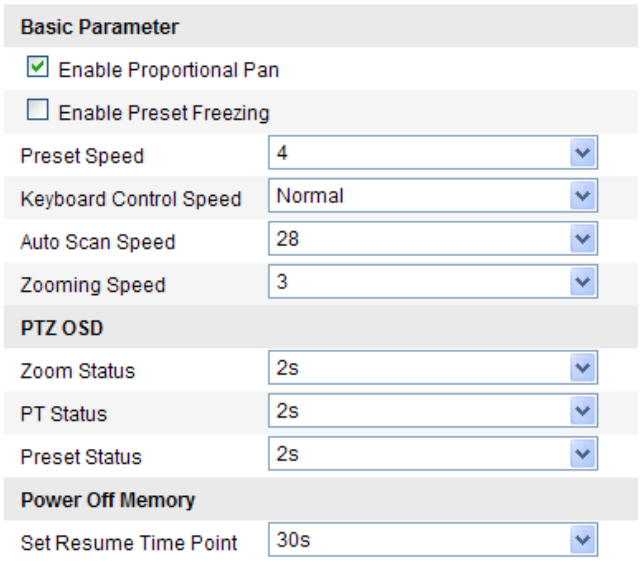



Figure 5-2 *Basic PTZ Configuration Interface*

2) Configure the following settings:

- **Basic Parameters:** Enable/disable proportional pan and preset freezing, set the preset speed, keyboard control speed, and auto scan speed.
  - **Proportional Pan:** If you enable this function, the pan/tilt speeds change according to the amount of zoom. When there is a large amount of zoom, the pan/tilt speed will be slower for keeping the image from moving too fast on the live view image.
  - **Preset Freezing:** This function enables the live view to switch directly from one scene defined by a preset to another, without showing the middle areas between these two, to ensure the surveillance efficiency. It can also reduce the use of bandwidth in a digital network system.
    **NOTE:** Preset freezing function is invalid when you calling a pattern.
  - **Preset Speed:** You can set the speed of a defined preset from 1 to 8.
  - **Keyboard Control Speed:** Define the speed of PTZ control by a keyboard as Low, Normal or High.
  - **Auto Scan Speed:** The dome provides 5 scan modes: auto scan, tilt scan, frame scan, random scan and panorama scan. The scan speed can be set from level 1 to 40.
  - **Zooming Speed**: The zoom speed is adjustable from level 1 to 3.
- **PTZ OSD:** Set the on-screen display duration of the PTZ status.
  - **Zoom Status:** Set the OSD duration of zooming status as 2 seconds, 5 seconds, 10 seconds, Always Close or Always Open.
  - **PT Status:** Set the azimuth angle display duration while panning and tilting as 2 seconds, 5 seconds, 10 seconds, Always Close or Always Open.
  - **Preset Status:** Set the preset name display duration while calling the preset as 2 seconds, 5 seconds, 10 seconds, Always Close or Always Open.
- **Power-off Memory:** The dome can resume its previous PTZ status or actions after it restarted from a power-off. You can set the time point of which the dome resumes its PTZ status. You can set it to resume the status of 30 seconds, 60 seconds, 300 seconds or 600 seconds before power-off.

3) Click Save to save the settings.

## 5.3 Configuring PTZ Limit Stops

***Purpose:***

The dome can be programmed to move within the configurable limit stops (left/right, up/down).

***Steps:***

1) Enter the Limit Configuration interface:
   **Configuration** > **Advanced Configuration** > **PTZ** > **Limit**

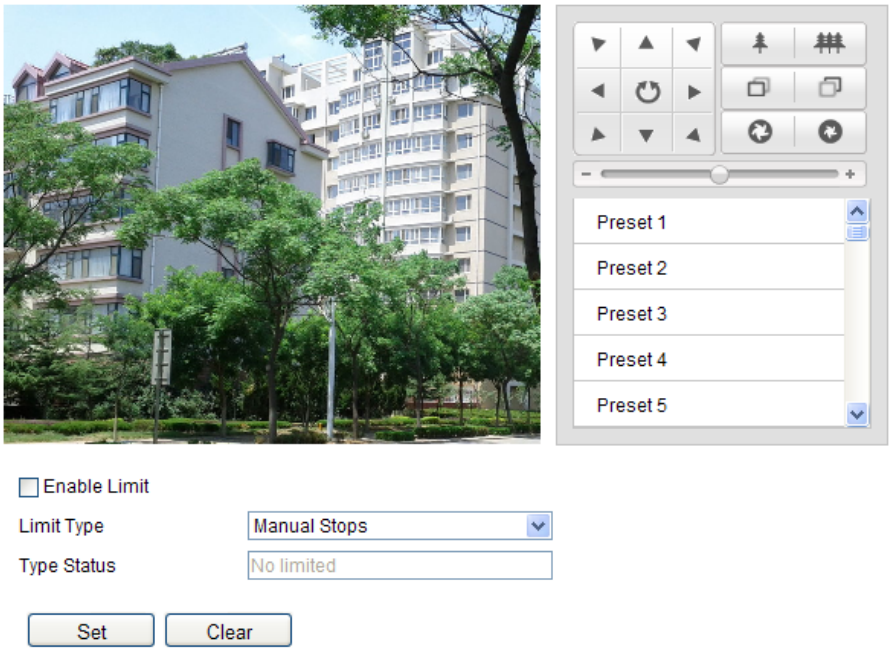



Figure 5-3 *Configure the PTZ Limit*

2) Click the checkbox of **Enable Limit** and choose the limit type as manual stops or scan stops.
   - **Manual Stops:**

   When manual limit stops are set, you can operate the PTZ control panel manually only in the limited surveillance area.
   - **Scan Stops:**

   When scan limit stops are set, the random scan, frame scan, auto scan, tilt scan, panorama scan is performed only in the limited surveillance area.

   NOTE: **Manual Stops** of **Limit Type** is prior to **Scan Stops.** When you set these two limit types at the same time, **Manual Stops** is valid and **Scan Stops** is invalid.
3) Click the PTZ control buttons to find the left/right/up/down limit stops; you can also call the defined presets and set them as the limits of the dome.
4) Click **Set** to save the limits or click **Clear** to clear the limits.

## 5.4 Configuring Scheduled Tasks

***Purpose:***

You can configure the network dome to perform a certain action automatically in a user-defined time period.

***Steps:***

1) Enter the Scheduled Task Settings interface:
   **Configuration**> **Advanced Configuration**> **PTZ** > **Scheduled Tasks**

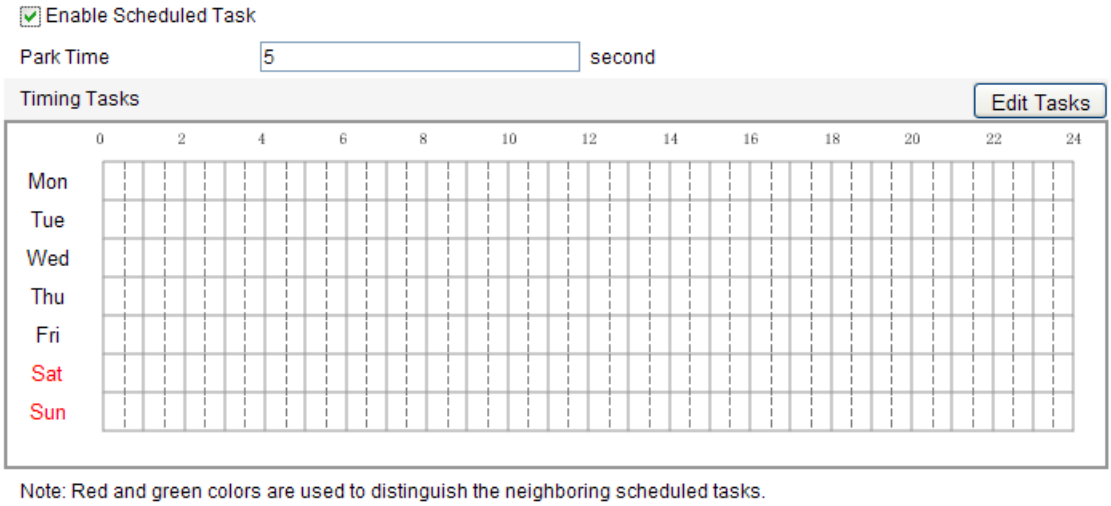



Figure 5-4 *Configure Scheduled Tasks*

2) Check the checkbox of **Enable Scheduled Task**.
3) Set the **Park Time**. You can set the park time (a period of inactivity) before the dome starts the scheduled tasks.
4) Set the schedule and task details.

***Steps:***

1) Click Edit Tasks to edit the task schedule.

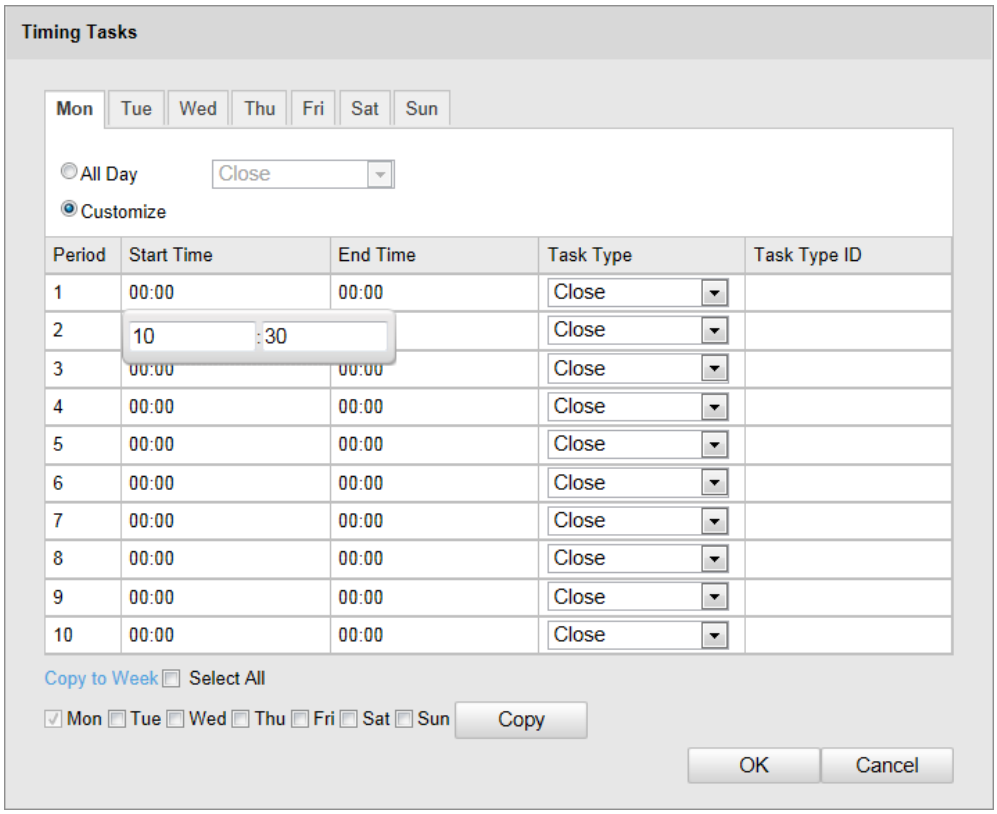



Figure 5-5 *Edit the Schedule and Task Type*

2) Choose the day you want to set the task schedule.

3) Click **All Day** to set the schedule as all day; or click **Customize** and input the **Start Time** and **End Time** for each task, and click **Enter** on your keyboard to enter the time.
4) Choose the task type from the drop-down list. You can choose scan, preset, pattern and etc.

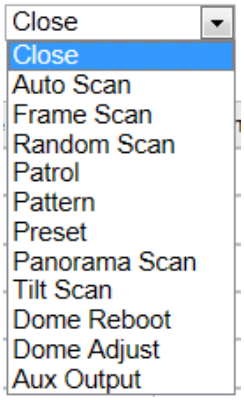



Figure 5-6 *Task Types*

5) After you set the scheduled task, you can copy the task to other days (Optional).
6) Click OK to save the settings.

**NOTE:** The time of each task can't be overlapped. Up to 10 tasks can be configured for each day.

7) Click Save to save the settings.

## 5.5 Configuring Park Actions

***Purpose:***

This feature allows the dome to start a predefined park action (scan, preset, pattern and etc.) automatically after a period of inactivity (park time).

**NOTE:** **Scheduled Tasks** function is prior to **Park Action** function. When these two functions are set at the same time, only the **Scheduled Tasks** function takes effect.

***Steps:***

1) Enter the Park Action Settings interface:
**Configuration** > **Advanced Configuration**> **PTZ** > **Park Action**

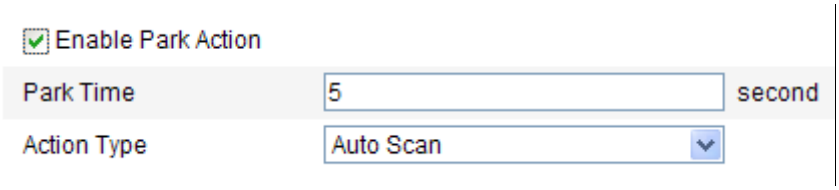



Figure 5-7 *Set the Park Action*

2) Check the checkbox of **Enable Park Action**.
3) Set the **Park Time** as the inactivity time of the dome before it starts the park actions.
4) Choose **Action Type** the from the drop-down list.

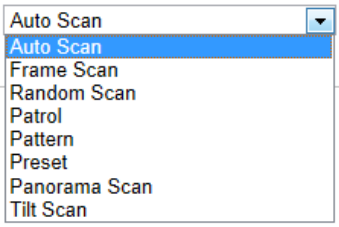



Figure 5-8 *Action Types*

5) Click Save to save the settings.

## 5.6 Configuring Privacy Mask

***Purpose:***

Privacy mask enables you to cover certain areas on the live video to prevent certain spots in the surveillance area from being live viewed and recorded.

***Steps:***

1) Enter the Privacy Mask Settings interface:
**Configuration** > **Advanced Configuration**> **PTZ** > **Privacy Mask**

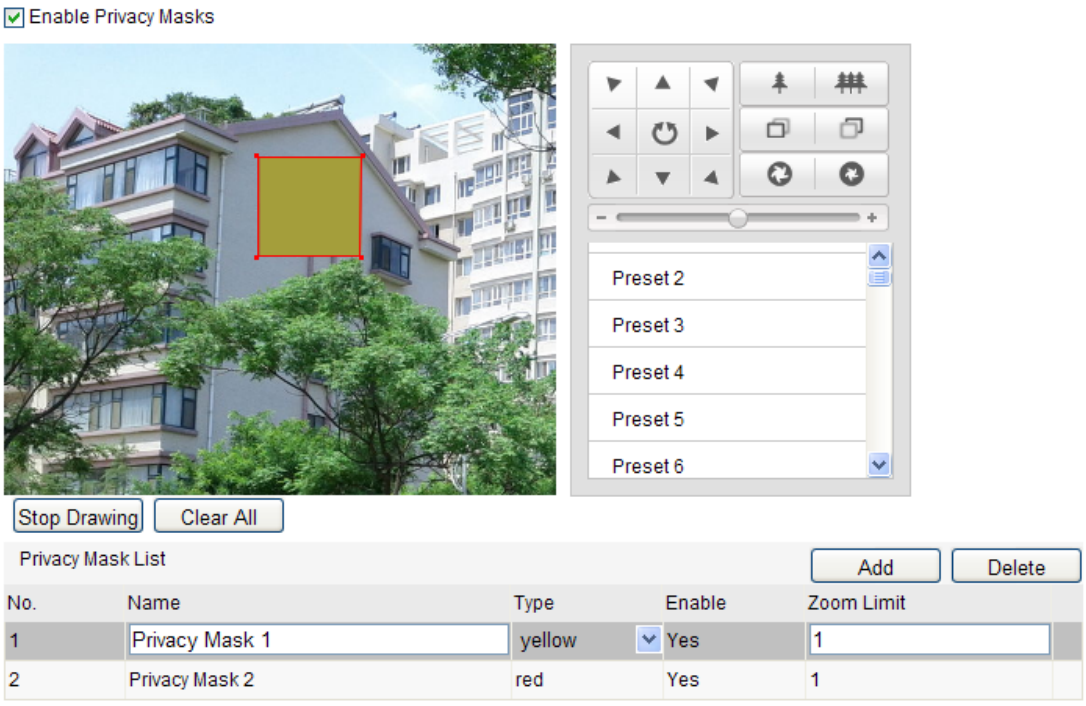



Figure 5-9 *Draw the Privacy Mask*

2) Click the PTZ control buttons to find the area you want to set the privacy mask.

3) Click Draw Area; click and drag the mouse in the live video window to draw the area.

4) You can drag the corners of the red rectangle area to draw a polygon mask.

5) Click Stop Drawin to finish drawing or click Clear All to clear all of the areas you set without saving them.

6) Click Add to save the privacy mask, and it will be listed in the **Privacy Mask List** area; you can select a mask and click Delete to delete it from the list; you can also define the color of the masks.

| No. | Name | Type | Enable |
|---|---|---|---|
| 1 | Privacy Mask 1 | gray | Yes |
| 2 | Privacy Mask 2 | gray | Yes |

Figure 5-10 *Privacy Mask List*

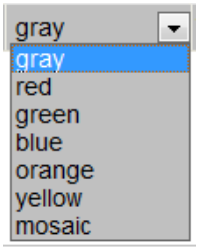



Figure 5-11 *Define Mask Color*

7) Check the checkbox of **Enable Privacy Mask** to enable this function.

**NOTE:** You are allowed to draw up to 24 areas on the same image.

## 5.7 Configuring Smart Tracking

***Purpose:***

The speed dome tracks the moving objects automatically after you configure this function.

**NOTE:** The VCA speed domes do not support this function.

***Steps:***

1) Enter the Smart Tracking Settings interface:

**Configuration > Advanced Configuration> PTZ > Smart Tracking**

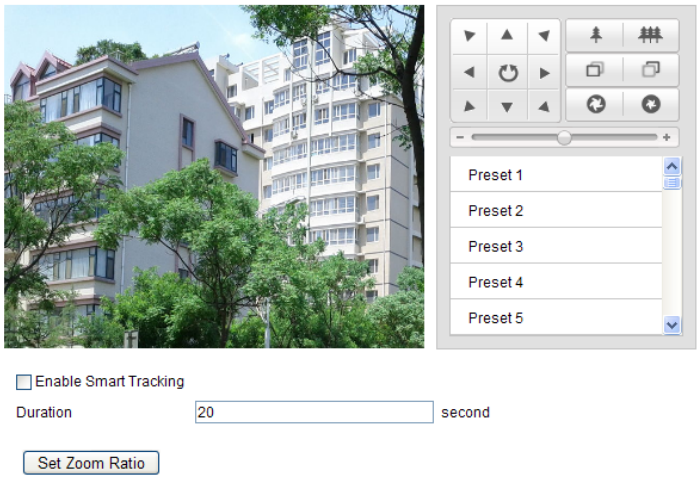



Figure 5-12 *Configure Smart Tracking*

2) Check the Enable Smart Tracking check box to enable smart tracking function.

3) Click the PTZ buttons to select an object.

4) Click Set Zoom Ratio to set the current zoom ratio as the tracking zoom ratio.

5) Set the tracking duration. The speed dome stops tracking when the duration time is up. The duration ranges from 0 to 300 seconds.

**NOTE:**

- Setting the duration to 0 means that there's no duration when speed dome tracks.
- Not all the speed dome models support this function. Please take the browser interface of the actual product as standard.

## 5.8 Configuring PTZ Control Priority

- The speed dome can be controlled by network and RS-485 signals. You can set the control priority of these two signals.
- The operation of **Operator** is prior to that of **User**. When the **Operator** is controlling the speed dome, the **User** cannot control it. When the **Operator** finishes, the **User** can control the speed dome after the **Delay** time. The **Delay** time can be set in Priority PTZ interface as shown follows.

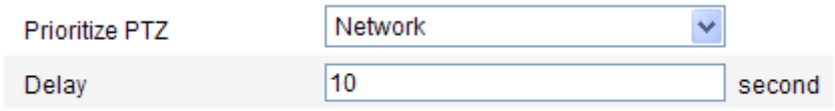



Figure 5-13 *PTZ Priority*

## 5.9 Clearing PTZ Configurations

***Purpose:***

You can clear PTZ configurations in this interface, including all presets, patrols, patterns, privacy masks, PTZ limits and scheduled tasks.

***Steps:***

1) Enter the Clearing Configuration interface:
   **Configuration > Advanced Configuration> PTZ > Clear Config**
2) Check the checkbox of the items you want to clear.
3) Click

to clear the settings.

# 6 Speed Dome Configuration

## 6.1 Configuring Local Parameters

**NOTE:** The local configuration refers to the parameters of the live view and other operations using the web browser.

***Steps:***

1) Enter the Local Configuration interface:
**Configuration > Local Configuration**

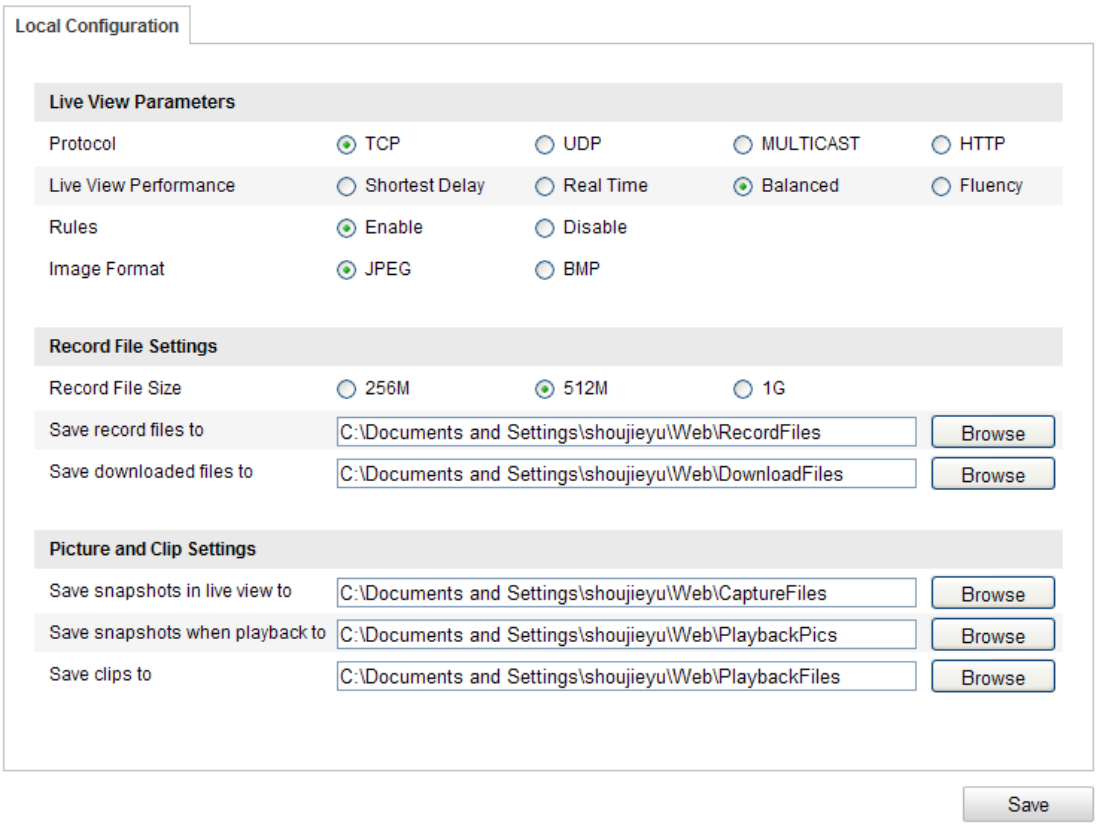


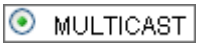

Figure 6-1 *Local Configuration Interface*

1) Configure the following settings:
   - **Live View Parameters:** Set the protocol type, stream type, image size and live view performance.
     - **Protocol Type:** TCP, UDP, MULTICAST and HTTP are selectable.

       **TCP:** Ensures complete delivery of streaming data and better video quality, however the real-time transmission will be affected.

       **UDP:** Provides real-time audio and video streams.

       **HTTP:** Allows the same quality as of TCP without setting specific ports for streaming under some network environments.

       **MULTICAST:** It's recommended to select the protocol type to 

when using the Multicast function. For other information about Multicast, refer to Section ***6.3.1 Configuring TCP/IP Settings***.

- **Live View Performance:** Set the live view performance to Least Delay, Balanced or Best Fluency.

  **NOTE:** Please set Live View Performance as Best Fluency for the high frame rate speed dome.
- **Rules:** You can enable or disable the rules of dynamic analysis for motion here.
- **Image Format:** The captured pictures can be saved as different format. JPEG and BMP are available.

- **Record File Settings:** Set the saving path of the video files.
  - **Record File Size:** Select the packed size of manually recorded and downloaded video files. The size can be set to 256M, 512M or 1G.
  - **Save record files to:** Set the saving path for the manually recorded video files.
  - **Save downloaded files to:** Set the saving path for the downloaded video files in

interface.
- **Picture and Clip Settings:** Set the saving paths of the captured pictures and clipped video files.
  - **Save snapshots in live view to:** Set the saving path of the manually captured pictures in

interface.
  - **Save snapshots when playback to:** Set the saving path of the captured pictures in

interface.
  - **Save clips to:** Set the saving path of the clipped video files in

interface.

    **NOTE:** You can click

to change the directory for saving video files, clips and pictures.

2) Click

to save the settings.

## 6.2 Configuring Time Settings

***Purpose:***

You can follow the instructions in this section to configure the time which can be displayed on the video. There are Time Zone, Time Synchronization, Daylight Saving Time(DST) functions for setting the time. Time Synchronization consists of auto mode by Network Time Protocol(NTP) server and manual mode.

To enter the Time Settings interface:

**Configuration > Basic Configuration > System > Time Settings**

Or **Configuration > Advanced Configuration > System > Time Settings**

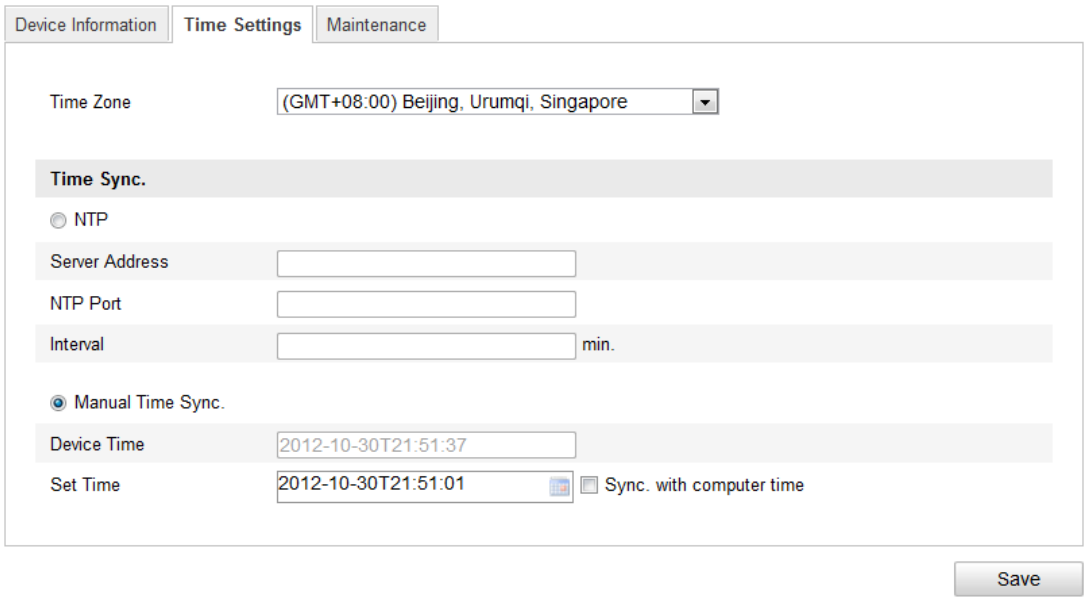



Figure 6-2 *Time Settings*

## CONFIGURING TIME SYNCHRONIZATION BY NTP SERVER

***Steps:***

1) Check the radio button to enable the **NTP** function.
2) Configure the following settings:

**Server Address:** IP address of NTP server.

**NTP Port:** Port of NTP server.

**Interval:** The time interval between the two synchronizing actions by NTP server. It can be set from 1 to 10080 minutes.

Figure 6-3 *Time Sync by NTP Server*

**NOTE:** If the speed dome is connected to a public network, you should use a NTP server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44). If the speed dome is set in a customized network, NTP software can be used to establish a NTP server for time synchronization.

## CONFIGURING TIME SYNCHRONIZATION MANUALLY

***Steps:***

1) Check the **Manual Time Sync** radio button.

2) Click to set the system time from the pop-up calendar.

3) Click to save the settings.

**NOTE:** You can also check the **Sync with local time** checkbox to synchronize the time of the speed dome with the time of your computer.

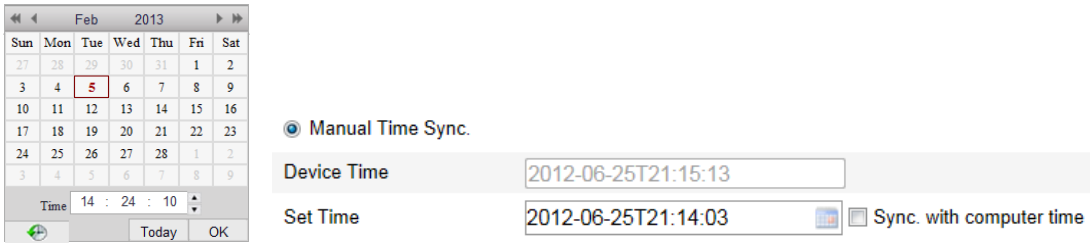



Figure 6-4 *Time Sync Manually*

## SELECT THE TIME ZONE

***Purpose:***

When the speed dome is taken to another time zone, you can use the **Time Zone** function to adjust the time. The time will be adjusted according to the original time and the time difference between the two time zones.

From the **Time Zone** drop-down menu as shown in Figure 6-5, select the Time Zone in which the speed dome locates.

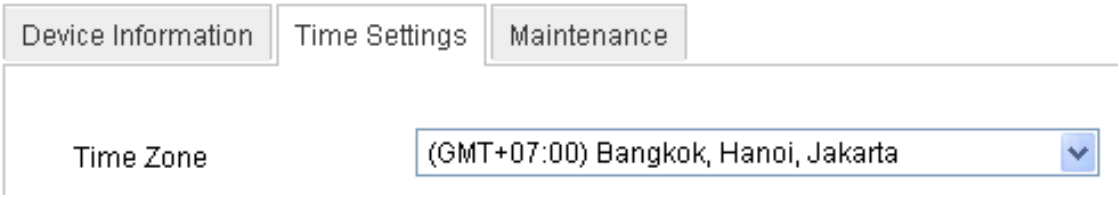


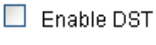

Figure 6-5 *Time Zone Settings*

## CONFIGURING DAYLIGHT SAVING TIME (SUMMER TIME)

***Purpose:***

If there is the habit of adjusting clocks forward in your country in certain time period of a year, you can turn this function on. The time will be adjusted automatically when the Daylight Saving Time(DST) comes.

***Steps:***

1) Enter the **DST** interface by **Configuration > Advanced Configuration > System > DST**
2) Check  to enable the DST function.
3) Set the date of the DST period.

4) Click Save to save the settings.

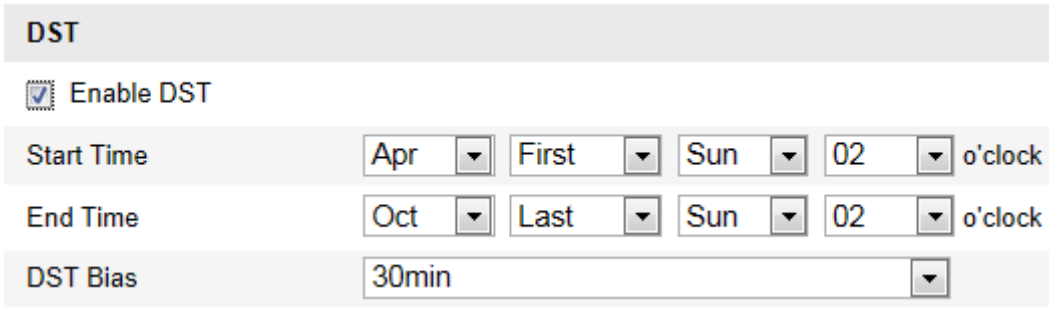



Figure 6-6 *DST Settings*

## 6.3 Configuring Network Settings

### CONFIGURING TCP/IP SETTINGS

***Purpose:***

TCP/IP settings must be properly configured before you operate the speed dome over your network. IPv4 and IPv6 are both supported.

***Steps:***

1) Enter TCP/IP Settings interface:

**Configuration > Basic Configuration > Network > TCP/IP**

Or **Configuration > Advanced Configuration > Network > TCP/IP**

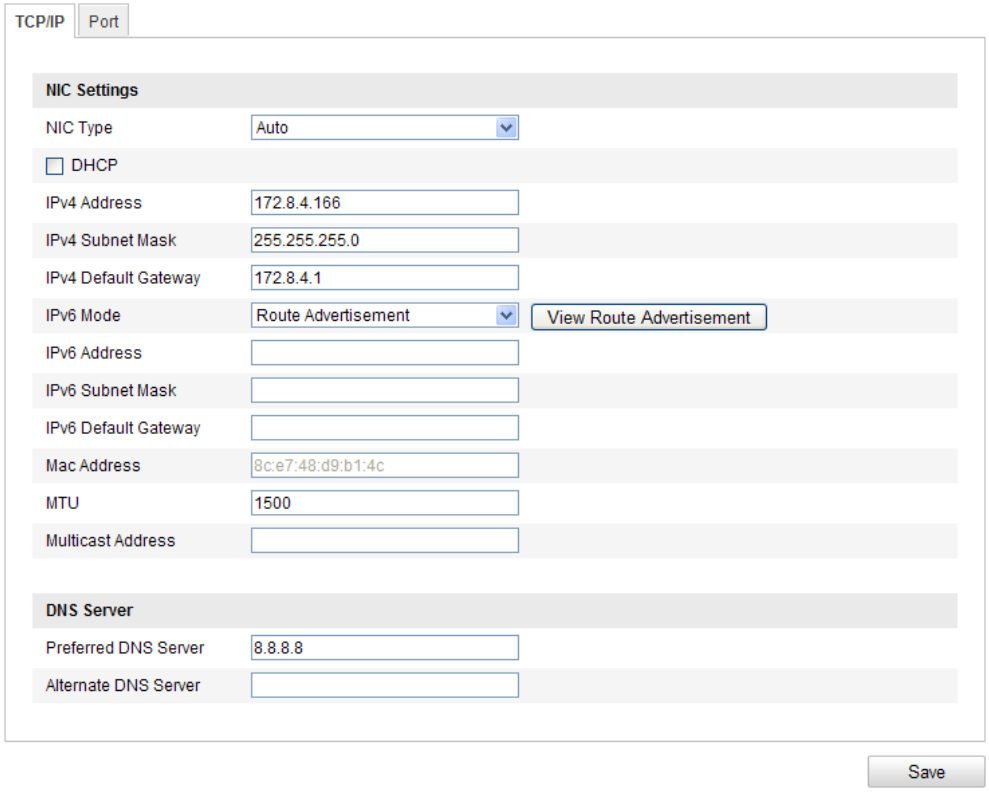



Figure 6-7 *TCP/IP Settings*

2) Configure the NIC settings, including the **IPv4(IPv6) Address**, **IPv4(IPv6) Subnet Mask** and **IPv4(IPv6) Default Gateway**.

3) Click Save to save the above settings.

**NOTE:**

- If the DHCP server is available, you can check ☐ DHCP to automatically obtain an IP address and other network settings from that server.
- The valid value range of Maximum Transmission Unit(MTU) is 500 ~ 9676. The default value is 1500.
- The Multicast sends a stream to the multicast group address and allows multiple clients to acquire the stream at the same time by requesting a copy from the multicast group address.

  Before utilizing this function, you have to enable the Multicast function of your router and configure the gateway of the network speed dome.
- If the DNS server settings are required for some applications (e.g., sending email), you should properly configure the **Preferred DNS Server** and **Alternate DNS server**.

Figure 6-8 *DNS Server Settings*

**NOTE:** The router must support the route advertisement function if you select **Route Advertisement** as the IPv6 mode.

## CONFIGURING PORT SETTINGS

***Purpose:***

If there is a router and you want to access the speed dome through Wide Area Network (WAN), you need to forward the 3 ports for the speed dome.

***Steps:***

1) Enter the Port Settings interface:

   **Configuration > Basic Configuration > Network > Port**

   Or **Configuration > Advanced Configuration > Network > Port**

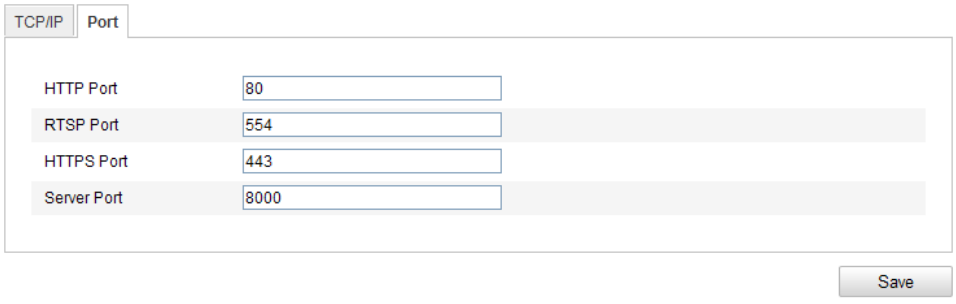



Figure 6-9 *Port Settings*

2) Set the HTTP port, RTSP port and port of the speed dome.

   **HTTP Port**: The default port number is 80.

   **RTSP Port**: The default port number is 554.

   **HTTPS Port**: The default port number is 443.

**SDK Port**: The default port number is 8000.

3) Click Save to save the settings.

## CONFIGURING PPPOE SETTINGS

***Purpose:***

If you have no router but only a modem, you can use Point-to-Point Protocol over Ethernet (PPPoE) function.

***Steps:***

1) Enter the PPPoE Settings interface:
   **Configuration >Advanced Configuration > Network > PPPoE**

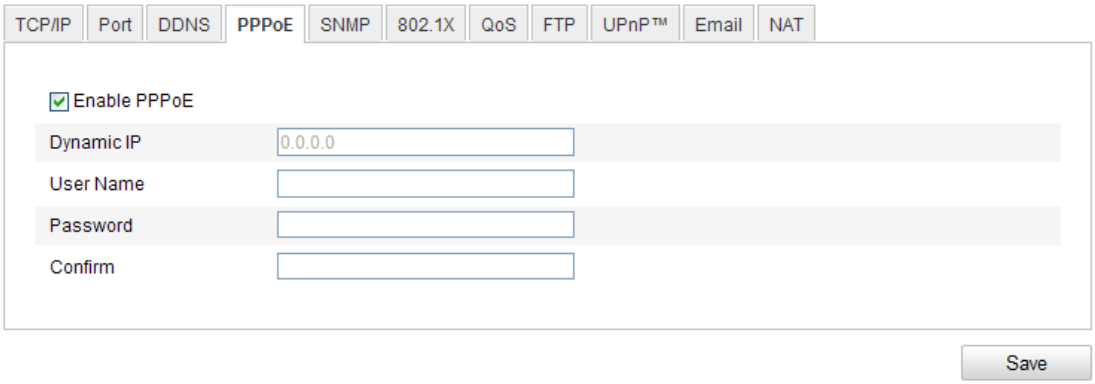



Figure 6-10 *PPPoE Settings*

2) Check the **Enable PPPoE** checkbox to enable this feature.
3) Enter **User Name**, **Password**, and **Confirm** password for PPPoE access.
   **NOTE:** The User Name and Password should be assigned by your ISP.
4) Click Save to save and exit the interface.

## CONFIGURING DDNS SETTINGS

***Purpose:***

If your speed dome is set to use PPPoE as its default network connection, you can use the Dynamic DNS (DDNS) for network access.

***Before you start*:**

Registration on the DDNS server is required before configuring the DDNS settings of the speed dome.

***Steps:***

1) Enter the DDNS Settings interface:
   **Configuration > Advanced Configuration > Network > DDNS**

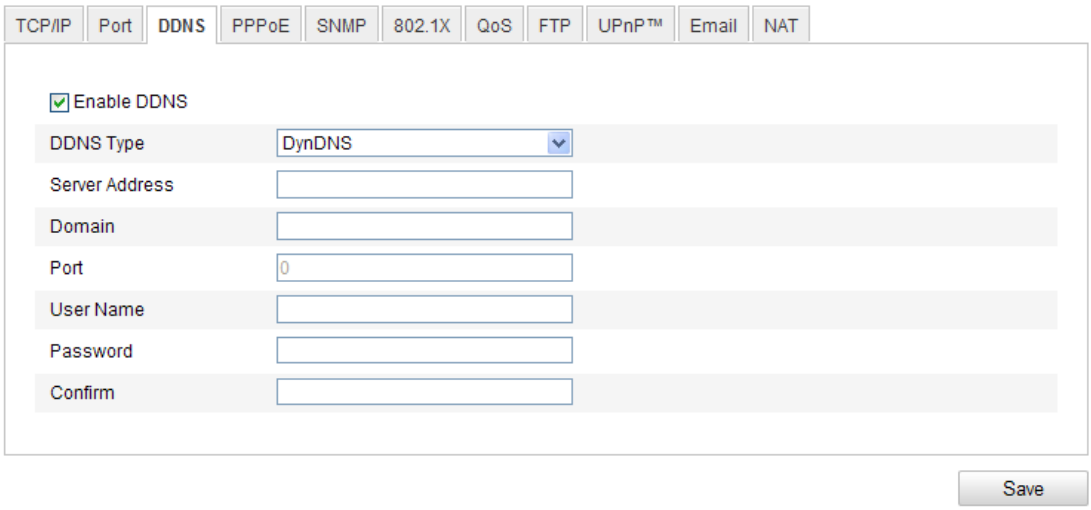



Figure 6-11 *DDNS Settings*

2) Check the **Enable DDNS** checkbox to enable this feature.
3) Select **DDNS Type**. Three DDNS types are selectable: IPServer, HiDDNS, NO-IP and DynDNS.

- **DynDNS:**

***Steps:***

1) Enter **Server Address** of DynDNS (e.g. members.dyndns.org).
2) In the **Domain** text field, enter the domain name obtained from the DynDNS website.
3) Enter the **Port** of DynDNS server.
4) Enter the **User Name** and **Password** registered on the DynDNS website.
5) Click Save to save the settings.

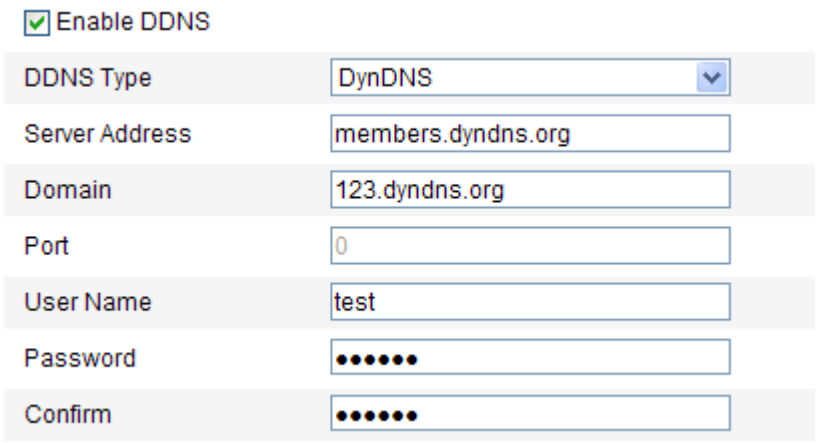



Figure 6-12 *DynDNS Settings*

- **IP Server:**

***Steps:***

1) Enter the Server Address of the IP Server.
2) Click Save to save the settings.

**NOTE:** The **Server Address** should be entered with the static IP address of the computer that runs the IP Server software. For the IP Server, you have to apply a static IP, subnet mask, gateway and preferred DNS from the ISP.

Figure 6-13 *IP Server Settings*

- **HiDDNS:**

  ***Steps:***

  1) Enter the Server Address: www.hiddns.com.
  2) Enter the Domain name of the camera. The domain is the same with the device alias in the HiDDNS server.
  3) Click Save to save the settings.

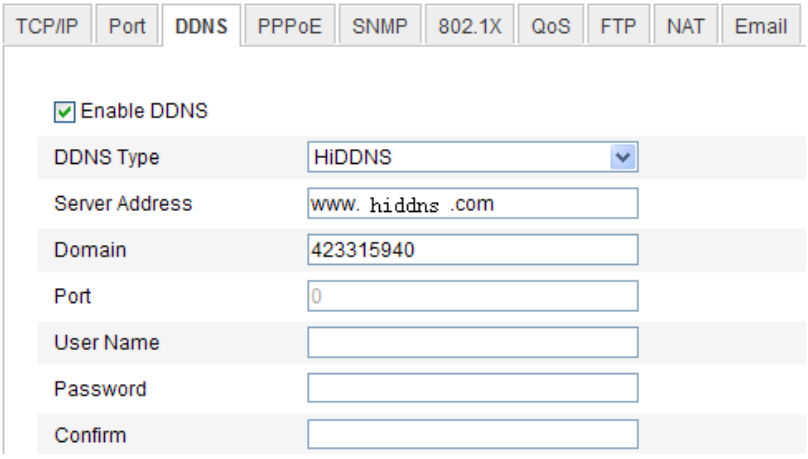



Figure 6-14 *HiDDNS Settings*

- **NO-IP:**

  ***Steps:***

  1) Enter **Server Address** of NO-IP.
  2) In the **Domain** text field, enter the domain name obtained from the NO-IP website.
  3) Enter the **Port** of NO-IP server.
  4) Enter the **User Name** and **Password** registered on the NO-IP website.
  5) Click Save to save the settings.

### CONFIGURING SNMP SETTINGS

***Purpose:***

You can use SNMP to get speed dome status and parameters related information.

***Before you start:***

Before setting the SNMP, please use the SNMP software and manage to receive the speed dome information via SNMP port. By setting the Trap Address, the speed dome can send the alarm event and exception messages to the surveillance center.

**NOTE:** The SNMP version you select should be the same as that of the SNMP software.

***Steps:***

1) Enter the SNMP Settings interface:
   **Configuration > Advanced Configuration > Network > SNMP**

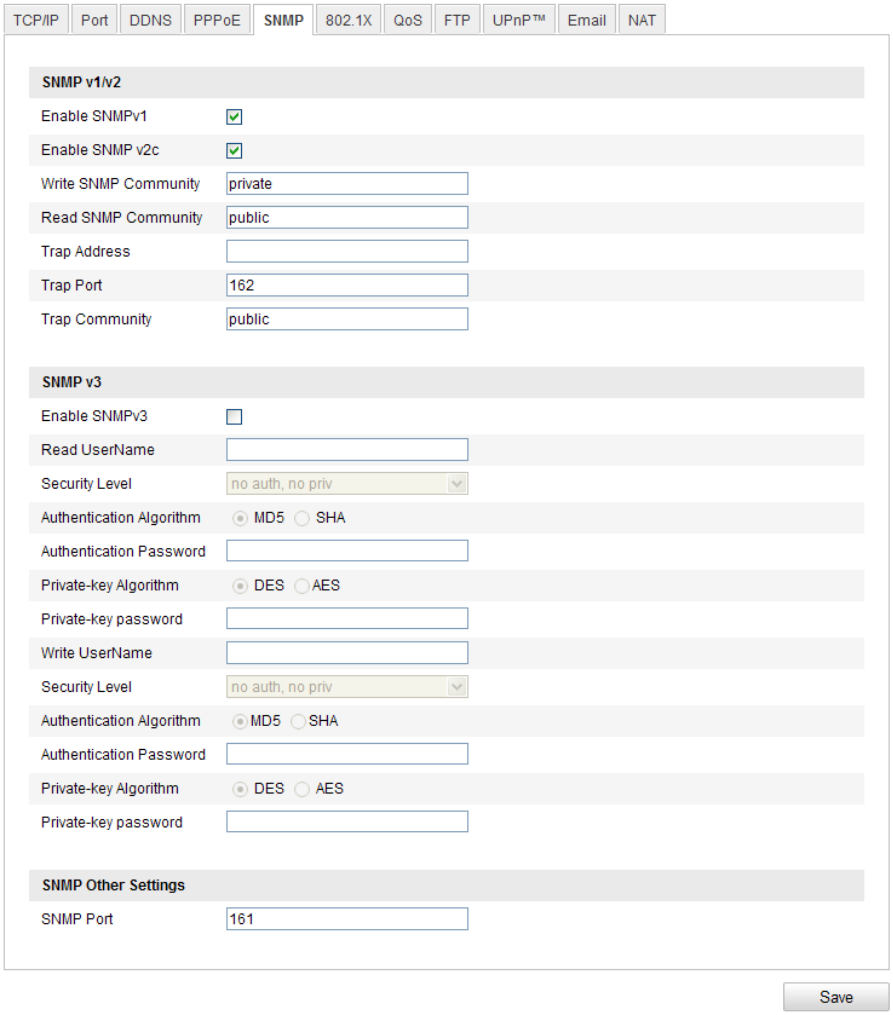



Figure 6-15 *SNMP Settings*

2) Check the corresponding version checkbox (Enable SNMP SNMPv1, Enable SNMP v2c, Enable SNMPv3) to enable the feature.

3) Configure the SNMP settings.
**NOTE:** The configuration of the SNMP software should be the same as the settings you configure here.

4) Click Save to save and finish the settings.

### CONFIGURING 802.1X SETTINGS

***Purpose:***

The speed dome supports IEEE 802.1X standard.

IEEE 802.1X is a port-based network access control. It enhances the security level of the LAN. When devices connect to this network with IEEE 802.1X standard, the authentication is needed. If the authentication fails, the devices don't connect to the network.

The protected LAN with 802.1X standard is shown as follows:

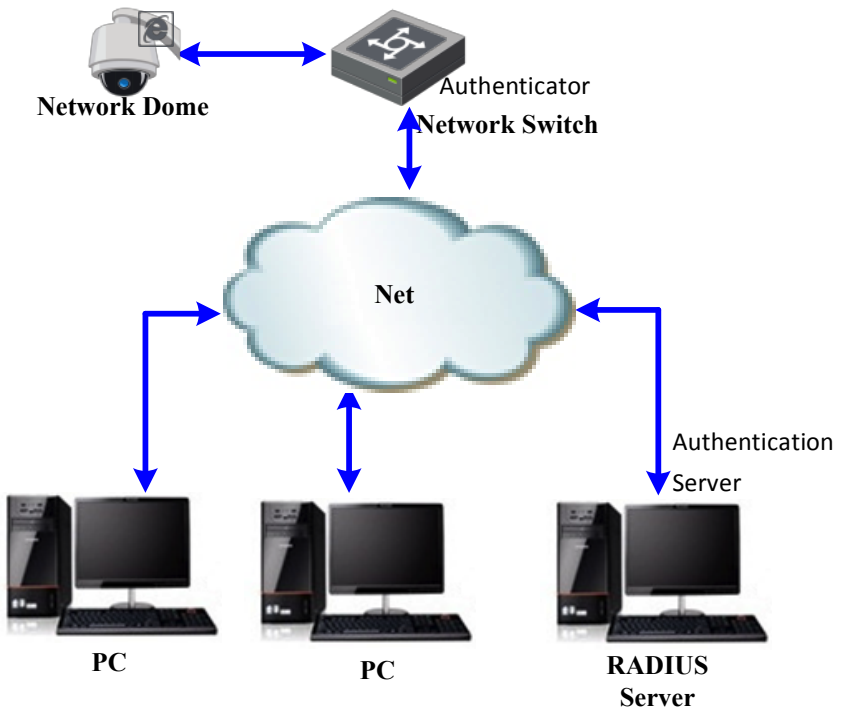



Figure 6-16 *Protected LAN*

- Before connecting the Network Camera to the protected LAN, please apply a digital certificate from a Certificate Authority.
- The network camera requests access to the protected LAN via the authenticator (a switch).
- The switch forwards the identity and password to the authentication server(RADIUS server).
- The switch forwards the certificate of authentication server to the network camera.
- If all the information is validated, the switch allows the network access to the protected network.

***Steps:***

1) Connect the network camera to your PC directly with a network cable.
2) Enter the 802.1X Settings interface:
   **Configuration > Advanced Configuration > Network > 802.1X**

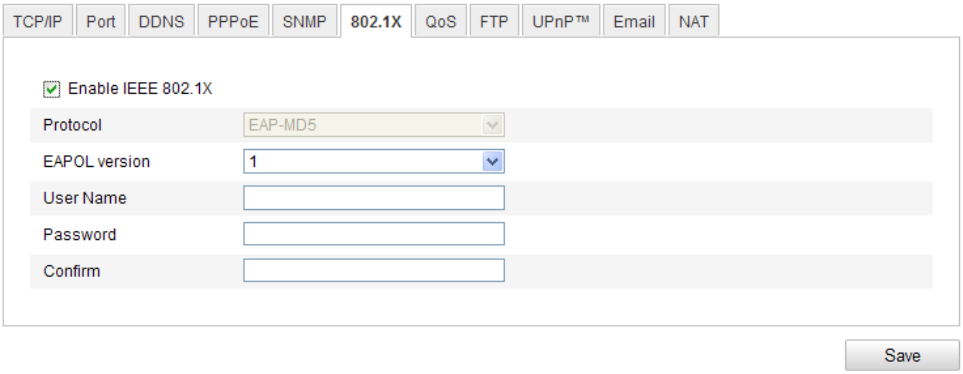



Figure 6-17 *802.1X Settings*

3) Check the **Enable IEEE 802.1X** checkbox to enable it.
4) Configure the 802.1X settings, including user name and password.

**NOTE:** The EAP-MD5 version must be identical with that of the router or the switch.

5) Enter the user name and password (issued by the CA) to access the server.

6) Click Save to finish the settings.

**NOTE:** The camera reboots when you save the settings.

7) After the configuration, connect the camera to the protected network.

## CONFIGURING QOS SETTINGS

***Purpose:***

QoS (Quality of Service) can help solve the network delay and network congestion by configuring the priority of data sending.

***Steps:***

1) Enter the QoS Settings interface:
**Configuration >Advanced Configuration > Network > QoS**

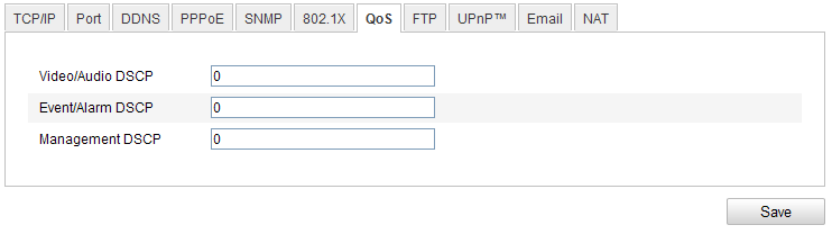



Figure 6-18 *QoS Settings*

2) Configure the QoS settings, including video / audio DSCP, event / alarm DSCP and Management DSCP.

The valid DSCP value ranges from 0 to 63. The DSCP value is bigger, the priority is higher.

3) Click Save to save the settings.

**NOTE:**

- Make sure that you enable the QoS function of your network device (such as a router).
- It will ask for a reboot for the settings to take effect.

## CONFIGURING FTP SETTINGS

***Purpose:***

You can set a FTP server and configure the following parameters for uploading captured pictures.

***Steps:***

1) Enter the FTP Settings interface:
**Configuration >Advanced Configuration > Network > FTP**

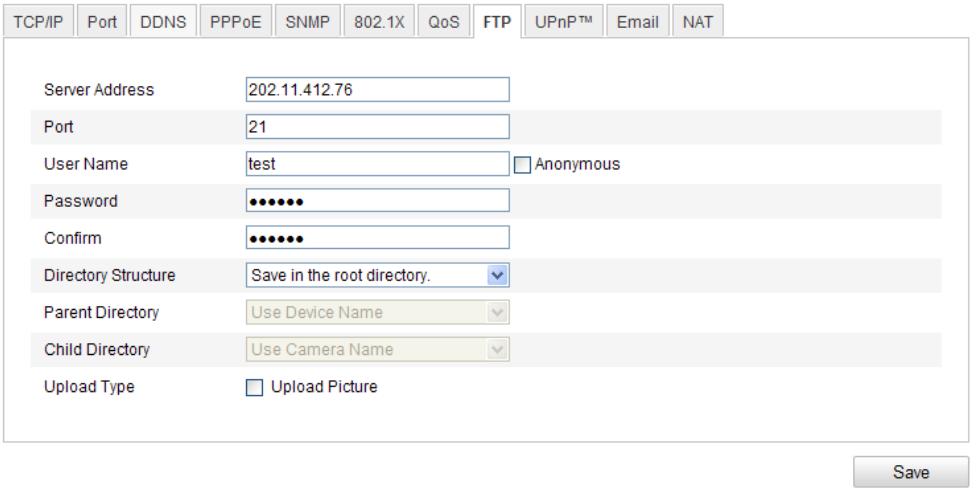



Figure 6-19 *FTP Settings*

2) Configure the FTP settings, including server address, port, user name, password, directory and upload type.

- **Setting the directory in FTP server for saving files**:

In the **Directory Structure** field, you can select the root directory, parent directory and child directory.

- **Root directory**: The files will be saved in the root of FTP server.
- **Parent directory**: The files will be saved in a folder in FTP server. The name of folder can be defined as shown in following Figure 6-20.

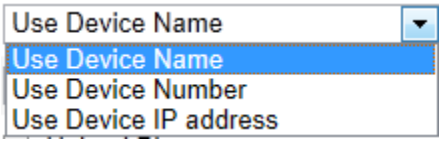



Figure 6-20 *Parent Directory*

- **Child directory**: It is a sub-folder which can be created in the parent directory. The files will be saved in a sub-folder in FTP server. The name of folder can be defined as shown in following Figure 6-21.

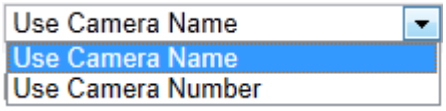



Figure 6-21 *Child Directory*

- **Upload type:** To enable uploading the captured picture to the FTP server.

3) Click Save to save the settings.

**NOTE:** If you want to upload the captured pictures to FTP server, you also have to enable the continuous snapshot or event-triggered snapshot in **Snapshot** interface. For detailed information, please refer to the Section ***7.3 Configuring Snapshot Settings***.

## CONFIGURING UPNP™ SETTINGS

Universal Plug and Play (UPnP™) is a networking architecture that provides compatibility among networking equipment, software and other hardware devices. The UPnP protocol allows devices to connect seamlessly and to simplify the implementation of networks in the house and corporate environments.

With the function enabled, you don't need to configure the port mapping for each port, and the camera is connected to the Wide Area Network via the router.

***Steps:***

1. Enter the UPnP™ settings interface.
   **Configuration >Advanced Configuration > Network > UPnP**
2. Check the checkbox to enable the UPnP™ function.
   You can edit the Friendly Name of the speed dome. This name can be detected by corresponding device, such as a router.

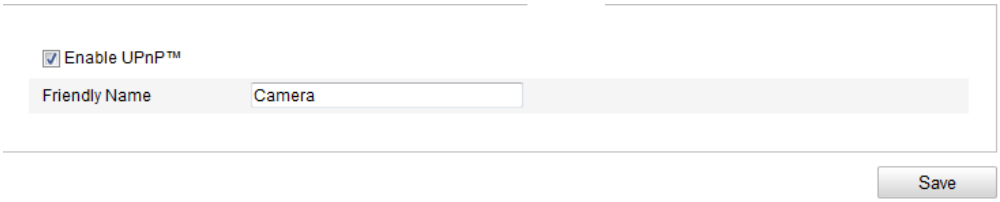
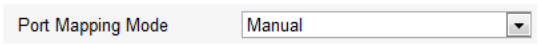



Figure 6-22 *Configure UPnP Settings*

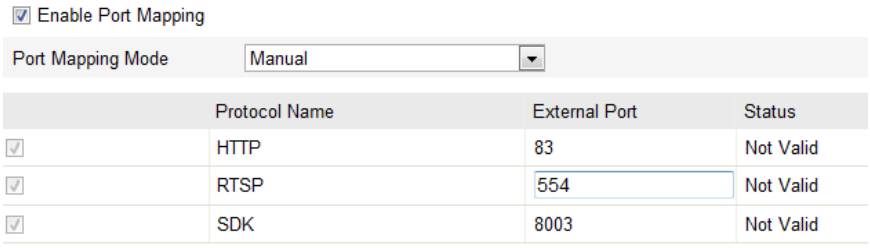
## CONFIGURING NAT (NETWORK ADDRESS TRANSLATION) SETTINGS

***Steps:***

1. Set the port mapping mode:
   **To port mapping with the default port numbers:**
   Choose

   **To port mapping with the customized port numbers:**
   Choose 

   And you can customize the value of the port number by yourself.




2. Click

to save the settings.

## CONFIGURING EMAIL SETTINGS

***Purpose:***

The system can be configured to send an Email notification to all designated receivers if an alarm event is detected, e.g., motion detection event, video loss, tamper-proof, etc.

***Before you start:***

Please configure the DNS Server settings under **Basic Configuration > Network > TCP/IP** or **Advanced Configuration > Network > TCP/IP** before using the Email function.

***Steps:***

1) Enter the Email Settings interface:

**Configuration > Advanced Configuration > Network > Email**

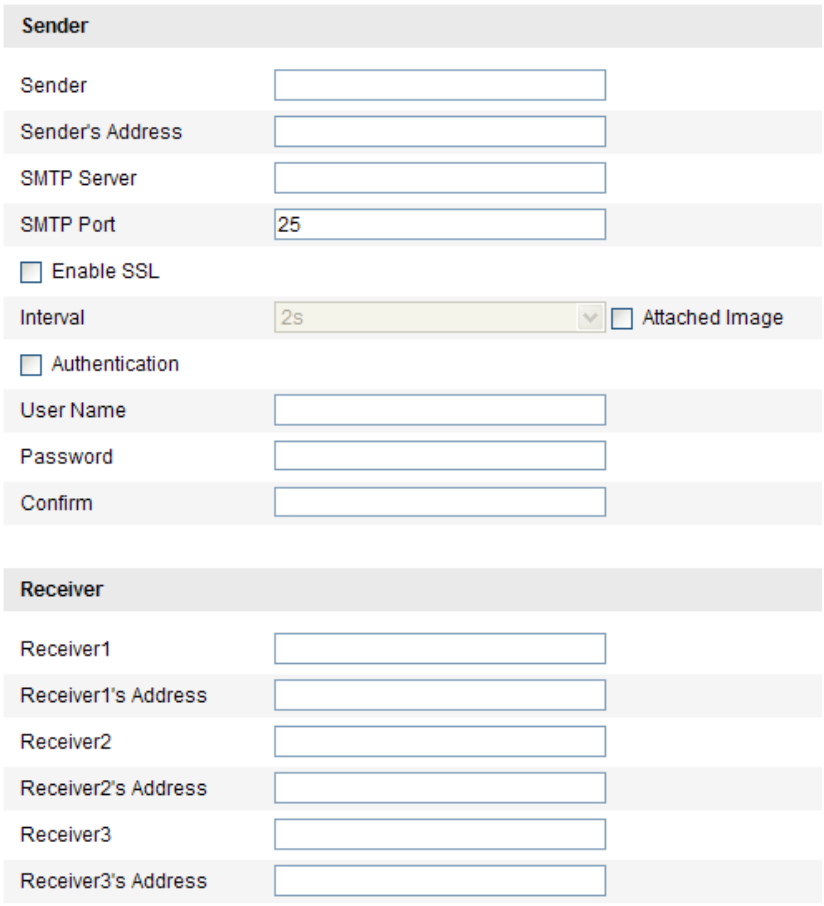



Figure 6-23 *Email Settings*

2) Configure the following settings:

- **Sender:** The name of the email sender.
- **Sender's Address:** The email address of the sender.
- **SMTP Server:** The SMTP Server IP address or host name (e.g., smtp.263xmail.com).
- **SMTP Port:** The SMTP port. The default TCP/IP port for SMTP is 25.
- **Enable SSL:** Check the checkbox to enable SSL if it is required by the SMTP server.
- **Attached Image:** Check the checkbox of Attached Image if you want to send emails with attached alarm images.

- **Interval:** The interval refers to the time between two actions of sending attached pictures.
- **Authentication** (optional): If your email server requires authentication, check this checkbox to use authentication to log in to this server and enter the login user name and password.
- **Receiver:** Select the receiver to which the email is sent. Up to 2 receivers can be configured.
- **Receiver:** The name of the user to be notified.
- **Receiver's Address**: The email address of user to be notified.

3) Click

to save the settings.

## 6.4 Configuring Video and Audio Settings

### CONFIGURING VIDEO SETTINGS

***Steps:***

1) Enter the Video Settings interface:
   **Configuration >Basic Configuration > Video / Audio > Video**
   Or **Configuration > Advanced Configuration > Video / Audio > Video**

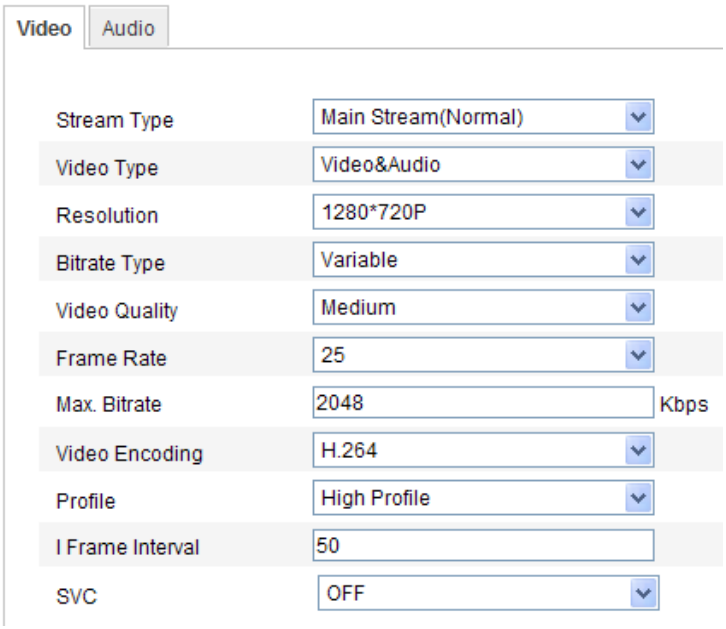



Figure 6-24 *Configure Video Settings*

2) Select the **Stream Type** of the speed dome to main stream (normal), sub-stream or third stream.

   The main stream is usually for recording and live viewing with good bandwidth, and the sub-stream, third stream can be used for live viewing when the bandwidth is limited. Refer to the Section ***6.1 Configuring Local Parameters*** for switching the main stream, sub-stream and third stream for live viewing.

3) You can customize the following parameters for the selected main stream, sub-stream or third stream:

- **Video Type**: Select the stream type to video stream, or video & audio composite stream. The audio signal will be recorded only when the **Video Type** is **Video & Audio**.
- Resolution: Select the resolution of the video output.
- Bitrate Type: Select the bitrate type to constant or variable.
- Video Quality: When bitrate type is selected as **Variable**, 6 levels of video quality are selectable.
- Frame Rate: The frame rate is to describe the frequency at which the video stream is updated and it is measured by frames per second (fps). A higher frame rate is advantageous when there is movement in the video stream, as it maintains image quality throughout.
- Max. Bitrate: Set the max. bitrate to 32~16384 Kbps. The higher value corresponds to the higher video quality, but the higher bandwidth is required.

- Video Encoding: The **Video Encoding** standard can be set to H.264, MPEG4 or MJPEG.
- Profile: You can set the profile level to High Profile, Main Profile or Basic Profile.
- I Frame Interval: Set the I-Frame interval from 1 to 400.
- SVC: SVC is a video encoding technology. It extracts frames from the original video and sends these frames to a video recorder which also supports SVC function when the network bandwidth is insufficient.

4) Click Save to save the settings.

## CONFIGURING AUDIO SETTINGS

***Steps:***

1) Enter the Audio Settings interface

**Configuration > Basic Configuration > Video / Audio > Audio**

Or **Configuration > Advanced Configuration > Video / Audio > Audio**

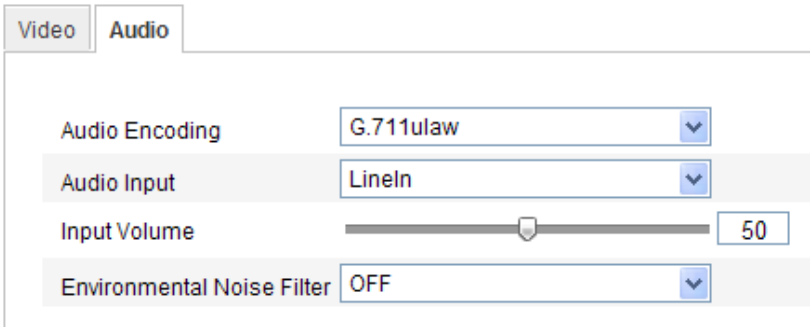



Figure 6-25 *Audio Settings*

2) Configure the following settings.
   - **Audio Encoding:** G.711ulaw, G.711alaw, MP2L2 and G.726 selectable.
   - **Audio Input:** When an intercom is connected to the speed dome, you need to set this option to **LineIn**. When a microphone is connected to the speed dome, you need to set this option to **MicIn**.
   - **Input Volume:** Slid the bar to turn up/down the volume. The value ranges from 0 to 100.
   - **Environmental Noise Filter**: When the monitoring environment is very noisy, you can enable this function to reduce part of the noise.

3) Click Save to save the settings.

## CONFIGURING ROI SETTINGS

***Before you start:***

ROI (Region of Interest) encoding is used to enhance the quality of images which are specified in advance.

**Stream Type:**

You can set the ROI function for main stream, sub stream or third stream. Select a stream type and then configure the ROI settings.

**Fixed Region:** The fixed region encoding is the ROI encoding for the manually configured area. And you can choose the Image Quality Enhancing level for ROI encoding, and you can also name the ROI area.

***Steps:***

1) Select a **Region No.**.
2) Check the check box of **Enable** under **Fixed Region**.
3) Click Draw Area and draw a red frame in the live view image.
4) Adjust the **ROI level** from 1 to 6. The higher the value, the better image quality in the red frame.
5) Enter a **Region Name** and click **Save** to save the settings.

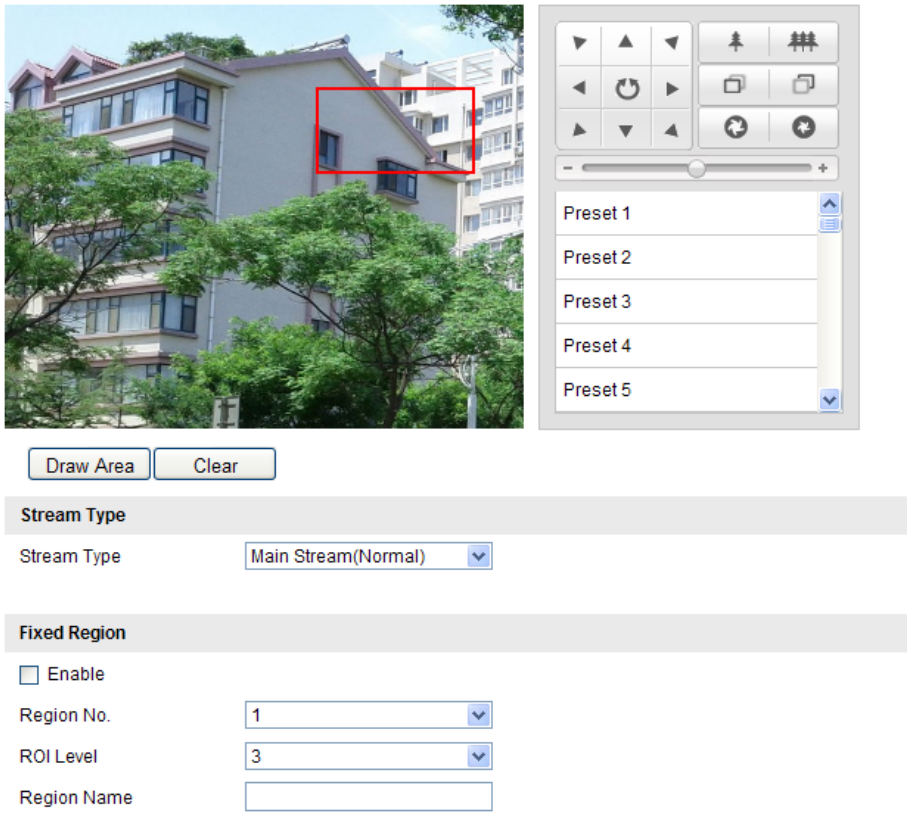



Figure 6-26 *Region of Interest*

## 6.5 Configuring Image Settings

### CONFIGURING DISPLAY SETTINGS

***Purpose:***

You can set the image quality of the speed dome, including brightness, contrast, saturation, sharpness, etc.

**NOTE:**

- The parameters in **Display Settings** interface vary depending on the models of speed dome.
- You can double click the live view to enter full screen mode and double click it again to exit.

***Steps:***

1) Enter the Display Settings interface:
   **Configuration > Basic Configuration> Image> Display Settings**
   Or **Configuration > Advanced Configuration> Image> Display Settings**
2) Set the image parameters of the speed dome.

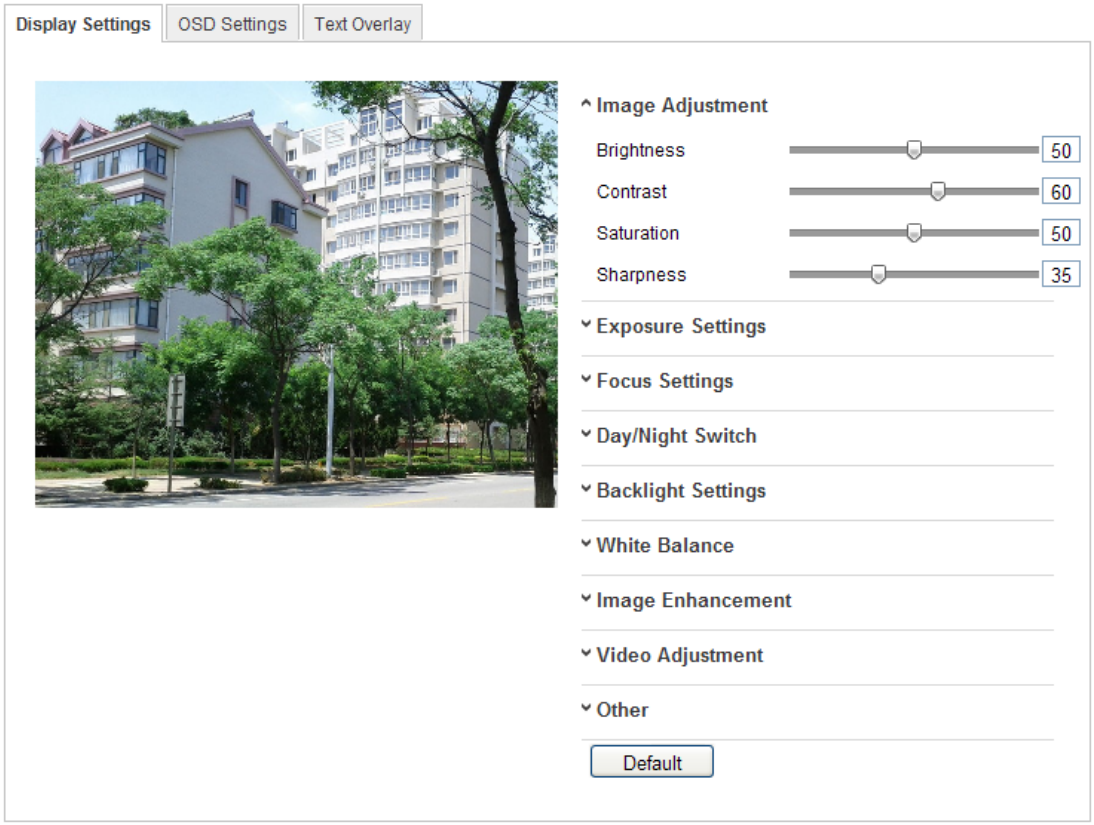



Figure 6-27 *Display Settings*

**Image Adjustment**

- **Brightness:** This feature is used to adjust brightness of the image. The value ranges from 0 to 100.
- **Contrast:** This feature enhances the difference in color and light between parts of an image. The value ranges from 0 to 100.
- **Saturation:** This feature is used to adjust color saturation of the image. The value ranges from 0 to 100.
- **Sharpness:** Sharpness function enhances the detail of the image by sharpening the edges in the image. The value ranges from 0 to 100.

  **NOTE:** This function varies depending on the models of speed dome.

**Exposure Settings**

- **Exposure Mode**: The **Exposure Mode** can be set to **Auto, Iris Priority, Shutter Priority, Manual.**
  - Auto: The iris, shutter and gain values will be adjusted automatically according to the brightness of the environment.

- Iris Priority: The value of iris needs to be adjusted manually. The shutter and gain values will be adjusted automatically according to the brightness of the environment.

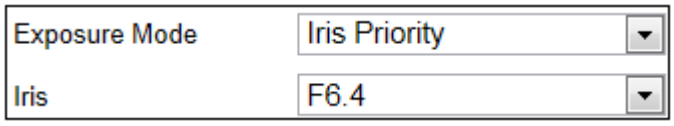



Figure 6-28 *Manual Iris*

- Shutter Priority: The value of shutter needs to be adjusted manually. The iris and gain values will be adjusted automatically according to the brightness of the environment.

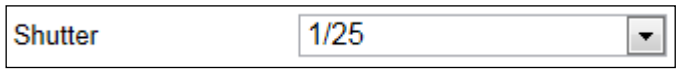



Figure 6-29 *Manual Shutter*

- Gain Priority: The value of gain needs to be adjusted manually. The shutter and iris values will be adjusted automatically according to the brightness of the environment.

Figure 6-30 *Manual Gain*

- Manual: In **Manual** mode, you can adjust the values of **Gain**, **Shutter**, **Iris** manually.

  **NOTE:** This function varies depending on the models of speed dome.

- **Limit Gain -** This feature is used to adjust gain of the image. The value ranges from 0 to 100.
- **Slow Shutter -** This function can be used in underexposure condition. It lengthens the shutter time to ensure full exposure. The slow shutter value can be set to **Slow Shutter*2, *4, *6, *12, *16, *24** and ***32**.

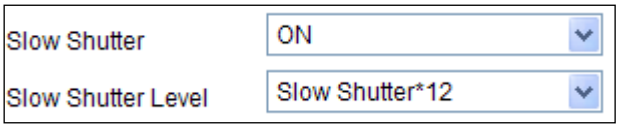



Figure 6-31 *Slow Shutter*

**Focus Settings**

- **Focus Mode -** The **Focus Mode** can be set to **Auto**, **Manual**, **Semi-auto**.
  - Auto**:** The speed dome focuses automatically at any time according to objects in the scene.
  - Semi-auto:

  The speed dome focuses automatically only once after panning, tilting and zooming.
  - Manual**:**

  In **Manual** mode, you need to use on the control panel to focus manually.
- **Min. Focus Distance -** This function is used to limit the minimum focus distance. The value can be set to 1.5m, 3m, 6m, 10cm and 50cm.

  **NOTE:** The minimum focus value varies depending on the models of speed dome.

**Day/Night Switch**

- **Day/Night Switch**

  The **Day/Night Switch** mode can be set to **Auto**, **Day** and **Night**.
  - **Auto**: In **Auto** mode, the day mode and night mode can switch automatically according to the light condition of environment. The switching sensitivity can be set to **Low**, **Normal**, **High**.

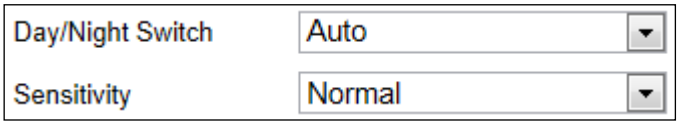



Figure 6-32 *Auto Mode Sensitivity*

- **Day**: In **Day** mode, the speed dome displays color image. It is used for normal lighting conditions.
- **Night**: In **Night** mode, the image is black and white. **Night** mode can increase the sensitivity in low light conditions.
- **Schedule**

  In **Schedule** mode, you can set the time schedule for day mode as shown in Figure 6-33. The rest time out of the schedule is for night mode.

  **NOTE:** This function varies depending on the models of speed dome.

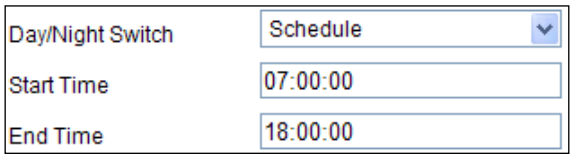



Figure 6-33 *Day Night Schedule*

- **Smart IR -** If the IR light is on and the image center is overexposure, you can enable this function.
- **IR Light Mode -** IR light mode can be set to **Auto** and **Manual**.
  - Auto: The brightness of the infrared light will be adjusted automatically. **IR Light Sensitivity** value ranges from 0 to 100. **Trigger Mode** can be set to **Camera** or **Photosensitive**.
  - Manual: you need to adjust the brightness value of infrared light manually. **IR Light Bright** value ranges from 0 to 100.

    **NOTE:** For detailed parameters configuration of IR light, you can enter the OSD menu by calling the special preset 95.

**NOTE:**

- When the **IR Light Mode** is auto, the day/night mode is adjusted automatically according to the IR Light Mode. Manually setting the day/night mode is invalid.
- When the **IR Light Mode** is manual and the **IR Light Bright** is 0, you can set the day/night mode manually.
- When the **IR Light Mode** is manual and the **IR Light Bright** is not 0, the night mode is set as the default mode. Manually setting the day/night mode is invalid.

**Backlight Settings**

- **BLC -** If there's a bright backlight, the subject in front of the backlight appears silhouetted or dark. Enabling **BLC**(back light compensation) function can correct the exposure of the subject. However, the backlight environment is washed out to white.
- **WDR (Wide Dynamic Range) -** The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, WDR balances the brightness level of the whole image and provide clear images with details.

You can enable or disable the WDR function as shown in Figure 6-34. The wide dynamic level ranges from 0 to 100.

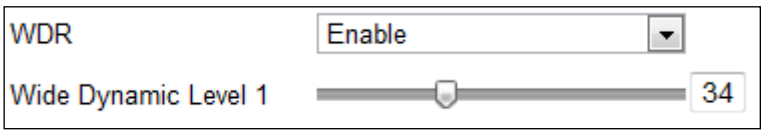



Figure 6-34 *WDR*

**NOTE:** This function varies depending on the models of speed dome.

- **HLC -** HLC (High Light Compensation) makes the camera identify and suppress the strong light sources that usually flare across a scene. This makes it possible to see the detail of the image that would normally be hidden.

**White Balance**

The **White Balance** mode can be set to **Auto**, **MWB**, **Outdoor**, **Indoor**, **Fluorescent Lamp**, **Sodium Lamp** and **Auto-Track**.

- **Auto**: In **Auto** mode, the camera retains color balance automatically according to the current color temperature.
- **Manual White Balance:** In **MWB** mode, you can adjust the color temperature manually to meet your own demand as shown in Figure 6-35.

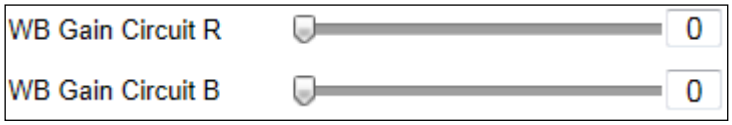



Figure 6-35 *Manual White Balance*

- **Outdoor**: You can select this mode when the speed dome is installed in outdoor environment.
- **Indoor**: You can select this mode when the speed dome is installed in indoor environment.
- **Fluorescent Lamp**: You can select this mode when there are fluorescent lamps installed near the speed dome.
- **Sodium Lamp**: You can select this mode when there are sodium lamps installed near the speed dome.
- **Auto-Track**: In **Auto-Track** mode, white balance is continuously being adjusted in real-time according to the color temperature of the scene illumination.

  **NOTE:** This function varies depending on the models of speed dome.

**Image Enhancement**

- **3D Digital Noise Reduction -** The 3D digital noise reduce function processes the noise in the video signal.

  You can set **Digital Noise Reduction** function to **Normal Mode** and adjust the **Noise Reduction Level** as shown in Figure 6-36. The level ranges from 0 to 100.

  If you are a professional technician, you can set it to **Expert Mode** then adjust **Space DNR Level** and **Time DNR Level**.

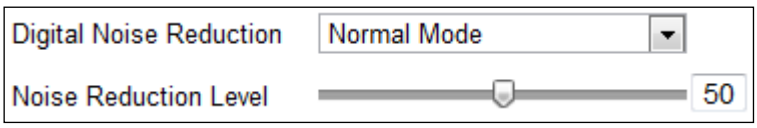


Figure 6-36 *3D Digital Noise Reduction*

**NOTE:** This function varies depending on the models of speed dome.

- **De-fog Mode -** When there is fog in the image, you can enable this function to get clear image.
- **EIS -** The live view image would be trembled and dim when the camera is shocked slightly in some monitoring conditions. And the electronic image stabilization (EIS) function is used to overcome this problem to ensure a steady and clear image.
- **Chroma Suppress -** The **Chroma Suppress** level ranges from 0 to 100 as shown in Figure 6-37.

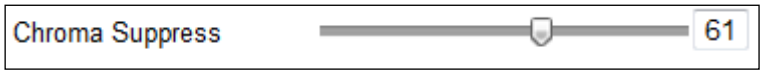



Figure 6-37 *Chroma Suppress*

**NOTE:** This function varies depending on the models of speed dome.

**Video Adjustment**

- **Mirror -** If you turn the **MIRROR** function on, the image will be flipped. It is like the image in the mirror. The flip direction can be set to OFF, LEFT/RIGHT, UP/DOWN or CENTER.
  **NOTE:** This function varies depending on the models of speed dome.
- **Video Standard -** You can set the **Video Standard** to 50hz(PAL) or 60hz(NTSC) according to the video system in your country.
  **NOTE:** This function varies depending on the models of speed dome.

**Other**

- **Lens Initialization -** The lens operates the movements for initialization when you check the check box of **Lens Initialization.**
- **Zoom Limit -** You can set **Zoom Limit** value to limit the maximum value of zooming. The value can be set to 20, 40, 80, 160 and 320.
  **NOTE:** This function varies depending on the models of speed dome.
- **Local Output -** You can select the output mode to ON or OFF.

### CONFIGURING OSD SETTINGS

***Purpose:***

The speed dome supports following on screen displays:

**Zoom:** Identifies the amount of magnification.

**Direction:** Displays panning and tilting direction, with the format of PXXX TXXX. The XXX following P indicates the degrees in pan direction, while the XXX following T indicates the degrees in tilt position.

**Time:** Supports for time display.

**Preset Title:** Identifies preset being called.

**Camera Name:** Identifies the name of speed dome.

You can customize the on screen display of time.

***Steps:***

1) Enter the OSD Settings interface:
   **Configuration > Advanced Configuration > Image > OSD Settings**

Figure 6-38 *OSD Settings*

2) Check the corresponding checkbox to select the display of speed dome name, date or week if required.
3) Edit the speed dome name in the text field of **Camera Name**.
4) Select from the drop-down list to set the time format, date format and display mode.
5) You can use the mouse to click and drag the text frame IPDome2 in the live view window to adjust the OSD position.

Figure 6-39 *Adjust OSD Location*

6) Click Save to activate above settings.

### CONFIGURING TEXT OVERLAY SETTINGS

***Purpose:***

You can customize the text overlay.

***Steps:***

1) Enter the Text Overlay Settings interface:
   **Configuration** > **Advanced Configuration** > **Image** > **Text Overlay**
2) Check the checkbox in front of textbox to enable the on-screen display.
3) Input the characters in the textbox.
4) Use the mouse to click and drag the red text frame

in the live view window to adjust the text overlay position.
5) Click

.

**NOTE:** There are up to 8 text overlays configurable.

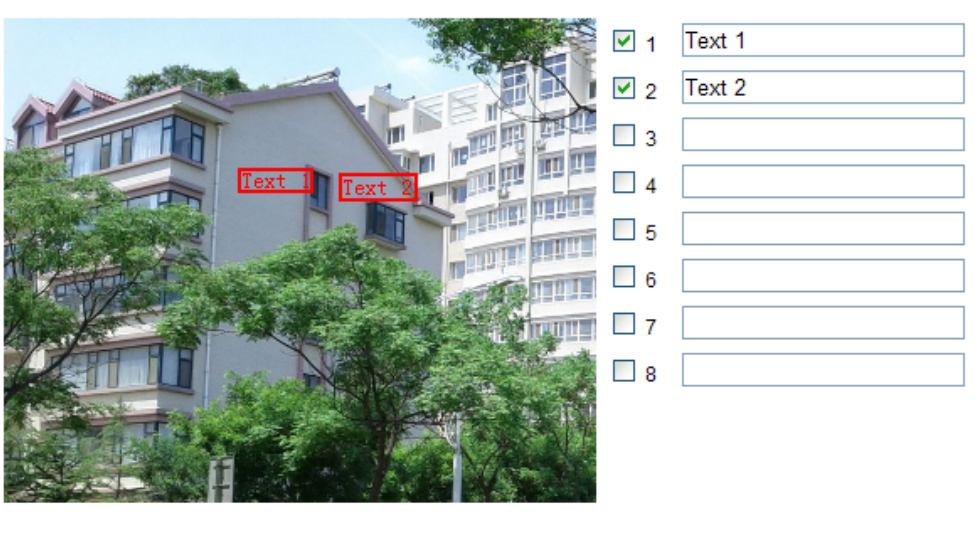



Figure 6-40 *Text Overlay Settings*

## 6.6 Configuring and Handling Alarms

***Purpose:***

This section explains how to configure the network speed dome to respond to alarm events, including motion detection, external alarm input, video loss, tamper-proof and exception. These events can trigger the alarm actions, such as Notify Surveillance Center, Send Email, Trigger Alarm Output, etc. For example, when an external alarm is triggered, the network speed dome sends a notification to an e-mail address.

### CONFIGURING MOTION DETECTION

***Purpose:***

Motion detection is a feature which can trigger alarm actions and actions of recording videos when the motion occurred in the surveillance scene.

***Task:***

Set the Motion Detection Area.

***Steps:***

1) Enter the motion detection settings interface

**Configuration > Advanced Configuration> Events > Motion Detection**

2) Check the checkbox of **Enable Motion Detection**.

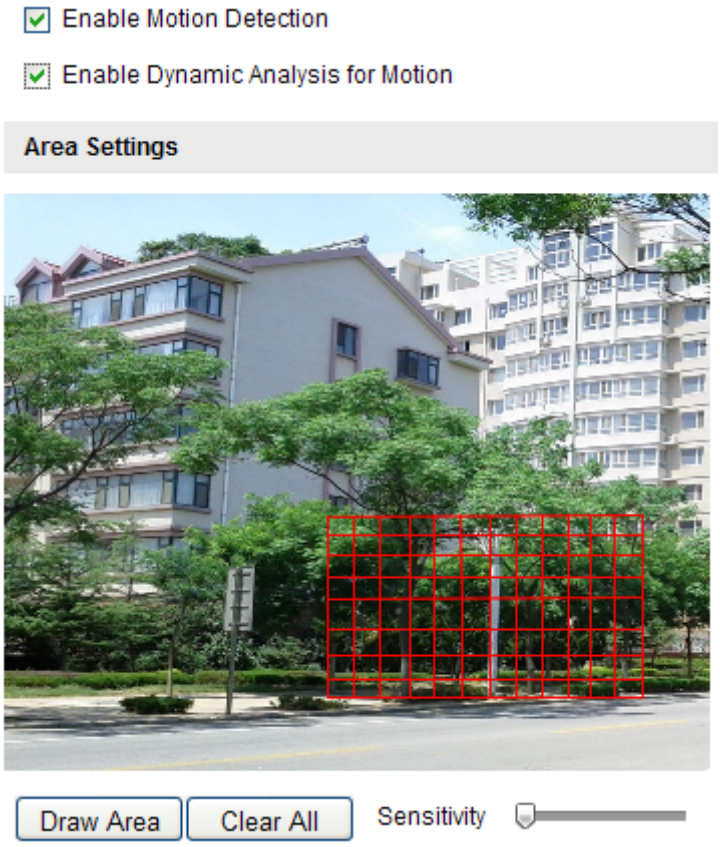
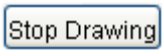



Figure 6-41 *Enable Motion Detection*

3) Click

. Click and drag the mouse on the live video image to draw a motion detection area.

**NOTE:** You can draw up to 8 motion detection areas on the same image.

4) Click 

to finish drawing.

**NOTE:** You can click

to clear all of the areas.

5) Move the slider

to set the sensitivity of the detection.

Set the Arming Schedule for Motion Detection.

***Steps:***

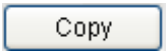
1) To edit the arming schedule as shown in Figure 6-43, click

in Figure 6-42.

Figure 6-42 *Arming Schedule*

2) Choose the day you want to set the arming schedule as shown in Figure 6-43.

3) Click to set the time period for the arming schedule.

4) After you set the arming schedule, you can click  to copy the schedule to other days (Optional).

5) Click to save the settings.

**NOTE:** The time of each period can't be overlapped. Up to 4 periods can be configured for each day.

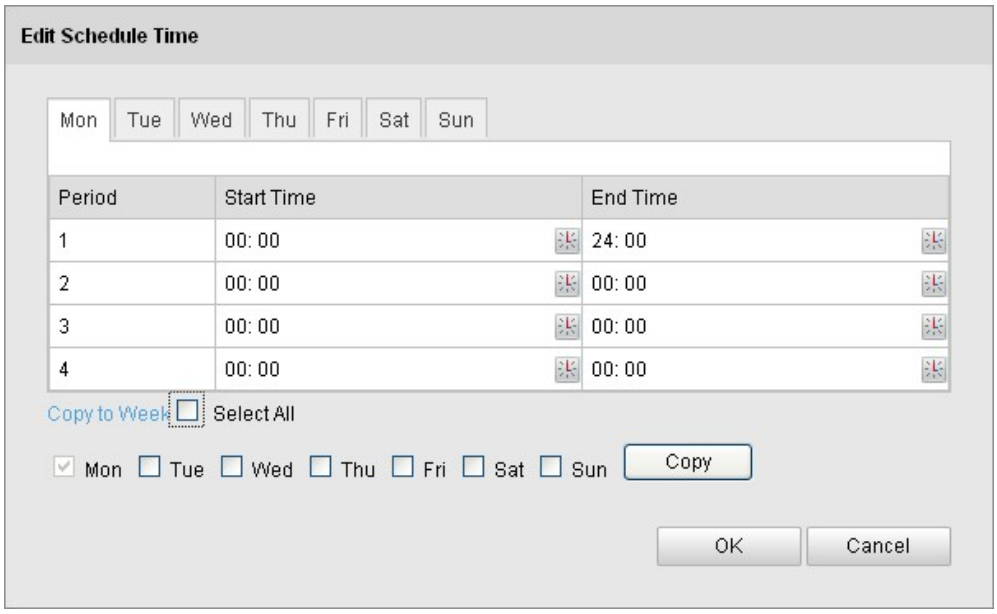



Figure 6-43 *Arming Time Schedule*

Set the Alarm Actions for Motion Detection.

***Purpose:***

You can specify the linkage method when an event occurs. The following contents are about how to configure the different types of linkage method.

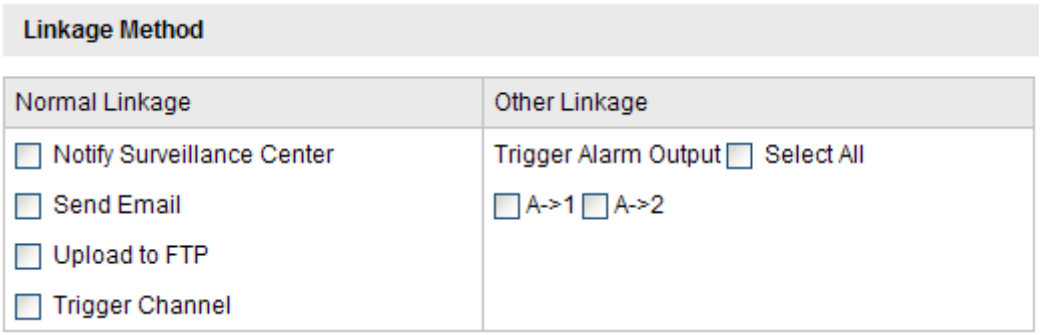



Figure 6-44 *Linkage Method*

Check the checkbox to select the linkage method. Notify surveillance center, send email, upload to FTP, trigger channel and trigger alarm output are selectable.

- **Notify Surveillance Center -** Send an exception or alarm signal to remote management software when an event occurs.
- **Send Email -** Send an email with alarm information to a user or users when an event occurs.

  **NOTE:** To send the Email when an event occurs, you need to refer to Section ***6.3.10 Configuring Email Settings*** to set the Email parameters.
- **Upload to FTP -** Capture the image when an alarm is triggered and upload the picture to a FTP server.

  **NOTE:** You need a FTP server and set FTP parameters first. Refer to Section ***6.3.8 Configuring FTP Settings*** for setting FTP parameters.
- **Trigger Channel -** Record a video when an event occurs.

  **NOTE:** You have to set the recording schedule to realize this function. Please refer to Section ***7.2 Configuring Recording Schedule*** for settings the recording schedule.
- **Trigger Alarm Output -** Trigger one or more external alarm outputs when an event occurs.

  **NOTE:** To trigger an alarm output when an event occurs, please refer to Section ***6.6.5 Configuring Alarm Output*** to set the alarm output parameters.

## CONFIGURING VIDEO LOSS ALARM

**Steps:**

1) Enter the Video Loss Setting interface:
   **Configuration > Advanced Configuration> Events > Video Loss**

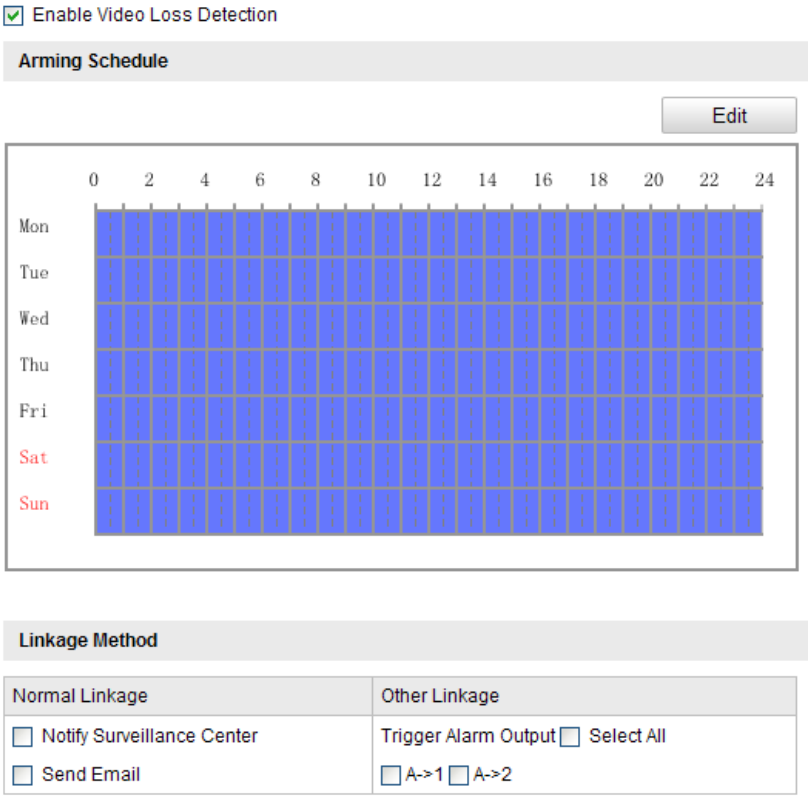



Figure 6-45 *Video Loss*

2) Check the **Enable Video Loss Detection** checkbox to enable the video loss detection.

3) Click Edit to edit the arming schedule for video loss detection. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to *Step 2* ***Set the Arming Schedule for Motion Detection*** in *Section* ***6.6.1.***

4) Check the checkbox to select the linkage method taken for the video loss alarm. Notify surveillance center, send email and trigger alarm output are selectable. Please *Step 3* ***Set the Alarm Actions for Motion Detection*** in *Section* ***6.6.1***.

5) Click Save to save the settings.

## CONFIGURING VIDEO TAMPERING ALARM

***Purpose:***

You can configure the speed dome to trigger the alarm actions when the lens is covered.

***Steps:***

1) Enter the video tampering Settings interface:
   **Configuration > Advanced Configuration > Events > Video Tampering**

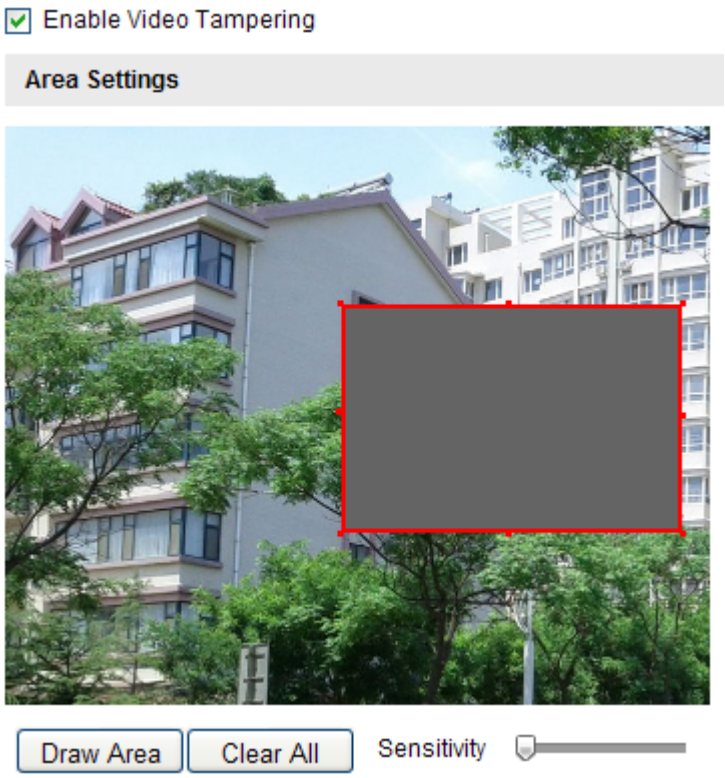



Figure 6-46 *Tampering Alarm*

2) Check **Enable Video Tampering** checkbox to enable the tampering detection.
3) Set the tampering area. Refer to *Step **1 Set the Motion Detection Area*** in Section ***6.6.1 Configuring Motion Detection***.
4) Click Edit to edit the arming schedule for tampering. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to *Step **2 Set the Arming Schedule for Motion Detection*** in Section ***6.6.1 Configuring Motion Detection***.
5) Check the checkbox to select the linkage method taken for the tampering. Notify surveillance center, send email and trigger alarm output are selectable. Please refer to *Step **3 Set the Alarm Actions for Motion Detection*** in Section ***6.6.1 Configuring Motion Detection***.
6) Click Save to save the settings.

### CONFIGURING EXTERNAL ALARM INPUT

***Steps:***

1) Enter the Alarm Input Settings interface:
**Configuration > Advanced Configuration> Events > Alarm Input**:
2) Choose the alarm input No. and the Alarm Type. The alarm type can be NO (Normally Open) and NC (Normally Closed).
3) Edit the name in Alarm Name to set a name for the alarm input (optional).

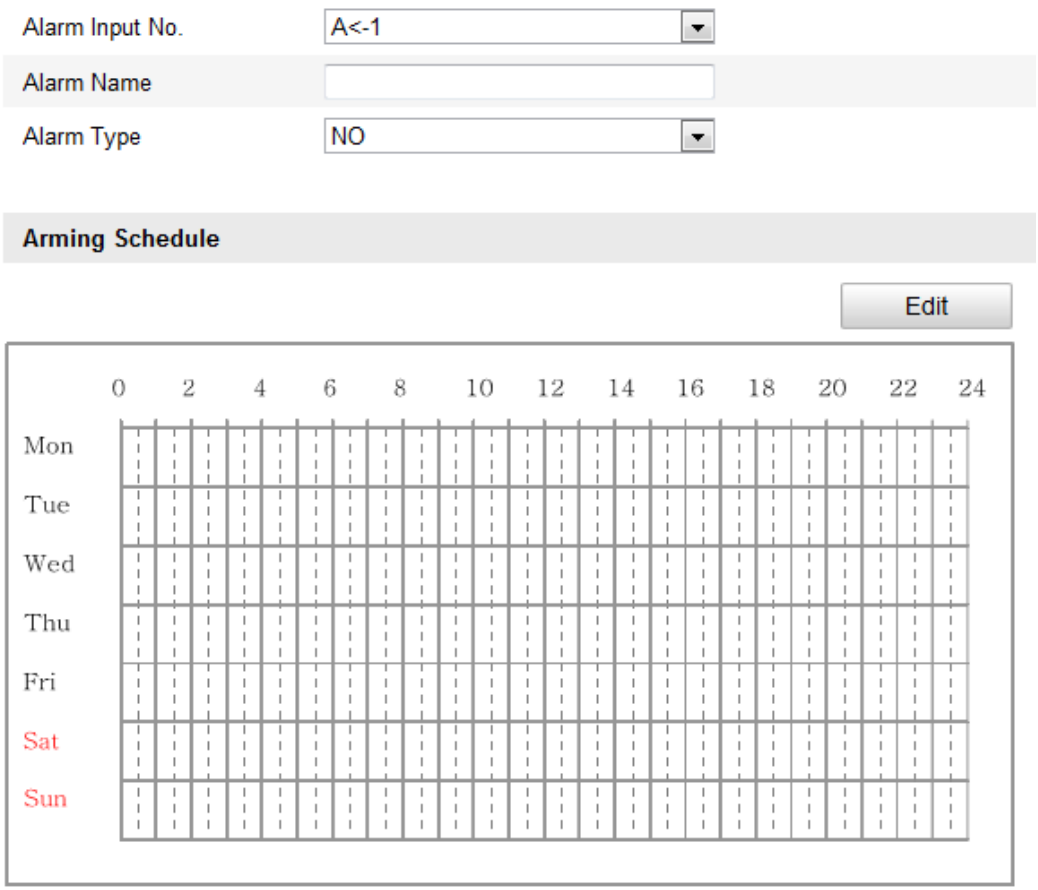



Figure 6-47 *Alarm Input Settings*

4) Click Edit to set the arming schedule for the alarm input. Refer to *Step **2 Set the Arming Schedule for Motion Detection*** in Section ***6.6.1 Configuring Motion Detection***.

*5)* Check the checkbox to select the linkage method taken for the alarm input. Refer to *Step **3 Set the Alarm Actions for Motion Detection*** in Section ***6.6.1 Configuring Motion Detection***.

6) You can also choose the PTZ linking for the alarm input. Check the relative checkbox and select the No. to enable Preset Calling, Patrol Calling or Pattern Calling.

7) You can copy your settings to other alarm inputs.

8) Click Save to save the settings.

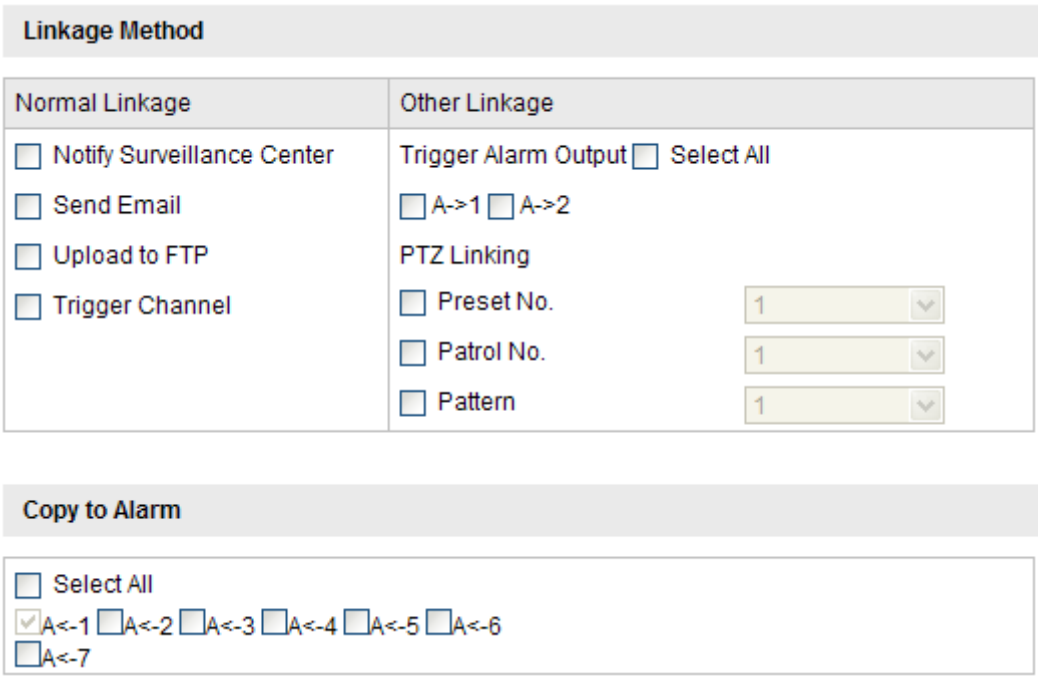



Figure 6-48 *Linkage Method*

### CONFIGURING ALARM OUTPUT

***Steps:***

1) Enter the Alarm Output Settings interface:
**Configuration>Advanced Configuration> Events > Alarm Output**
2) Select one alarm output channel in the **Alarm Output** drop-down list.
3) Set a name in

for the alarm output (optional).
4) The **Delay** time can be set to **5sec**, **10sec**, **30sec**, **1min**, **2min**, **5min, 10min** or **Manual**. The delay time refers to the time duration that the alarm output remains in effect after alarm occurs.
5) Click

to enter the **Edit Schedule Time** interface. The time schedule configuration is the same as the settings of the arming schedule for motion detection. Refer to *Step **2 Set the Arming Schedule for Motion Detection*** in Section ***6.6.1 Configuring Motion Detection***.
6) You can copy the settings to other alarm outputs.
7) Click

to save the settings.

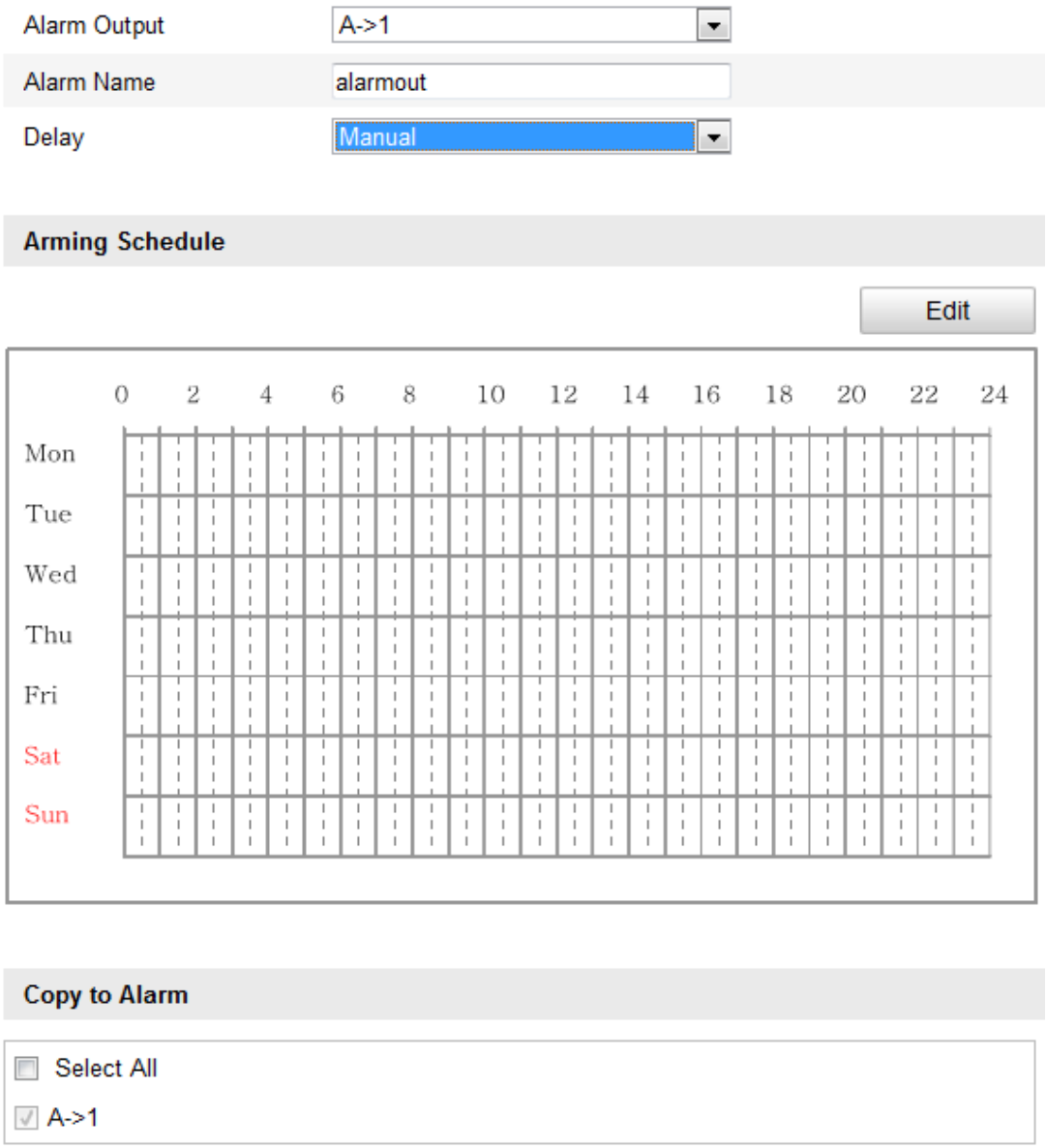



Figure 6-49 *Alarm Output Settings*

### HANDLING EXCEPTION

The exception type can be HDD full, HDD error, network disconnected, IP address conflicted and illegal login to the speed domes.

***Steps:***

1) Enter the Exception Settings interface:
   **Configuration > Advanced Configuration> Events > Exception**
2) Check the checkbox to set the actions taken for the Exception alarm. Refer to *Step **3 Set the Alarm Actions Taken for Motion Detection*** in Section ***6.6.1 Configuring Motion Detection***.

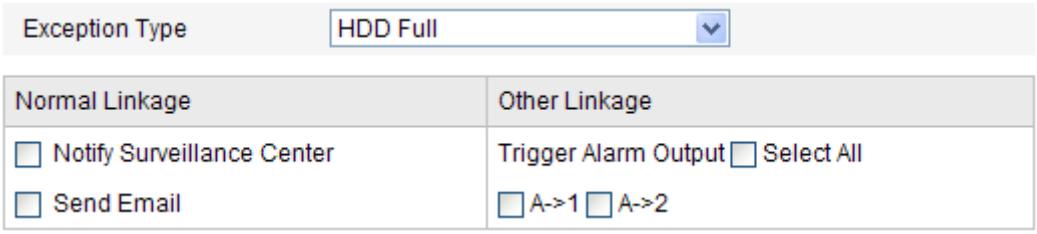



Figure 6-50 *Exception Settings*

3) Click Save to save the settings.

## DETECTING AUDIO EXCEPTION

***Purpose:***

When you enable this function and audio exception occurs, the alarm actions will be triggered.

***Steps:***

1) Enter the video audio exception detection interface:

**Configuration > Advanced Configuration > Events > Audio Exception Detection**

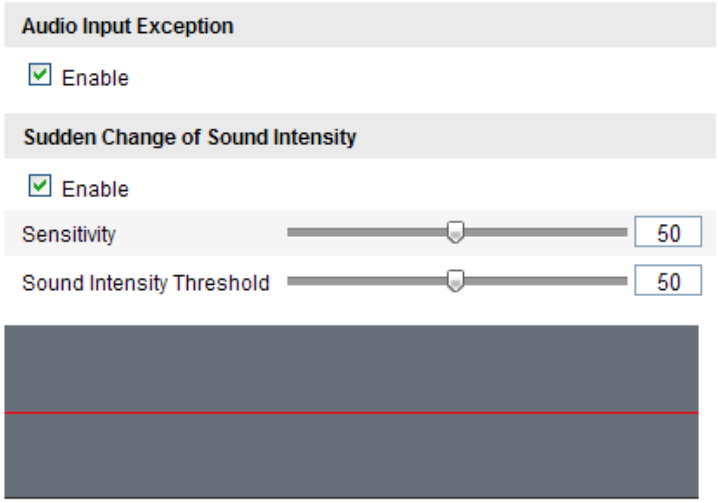



Figure 6-51 *Audio Exception Detection*

2) Check **Enable** under **Audio Input Exception** checkbox to enable the audio input exception detection.
3) Check **Enable** under **Sudden Change of Sound Intensity** checkbox to enable the sudden change detection.
   - **Sensitivity**: Range [1-100], the smaller the value the more severe the sound change will trigger the detection.
   - **Sound Intensity Threshold**: Range [1-100], it can filter the sound in the environment, the louder the environment sound, the higher the value should be. You can adjust it according to the actual environment.

4) Click Edit to edit the arming schedule. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to *Step **2 Set the Arming Schedule for Motion Detection*** in Section ***6.6.1 Configuring Motion Detection***.
5) Check the checkbox to select the linkage method taken for audio exception. Notify surveillance center, send email, trigger alarm output, etc. are selectable. Please refer to *Step **3 Set the Alarm Actions for Motion Detection*** in Section ***6.6.1 Configuring Motion Detection***.
6) Click Save to save the settings.

# 7 Record Settings

***Before you start:***

To configure record settings, please make sure that you have the network storage device within the network or the Micro SD card inserted in your speed dome.

## 7.1 Configuring NAS Settings

***Before you start:***

The network disk should be available within the network and properly configured to store the recorded files, log files, etc.

***Steps:***

1) Add the network disk
2) Enter the NAS (Network-Attached Storage) Settings interface:

   **Configuration > Advanced Configuration > Storage > NAS**
3) Select the NAS type as NFS or SMB/CIFS. If you select SMB/CIFS, you need to enter the User Name and Password.

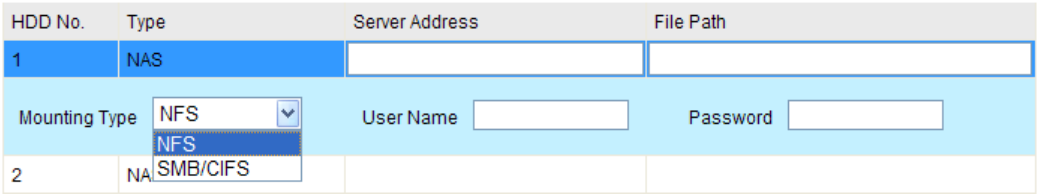



Figure 7-1 *Select NAS Type*

4) Enter the IP address of the network disk. The default NFS storage format of file path is */dvr/test* as shown in Figure 7-2. And the default SMB/CIFS storage format of file path is */test*.

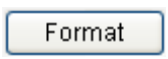
| HDD No. | Type | Server Address | File Path |
|---|---|---|---|
| 1 | NAS | 10.99.105.249 | /dvr/test |
| 2 | NAS | | |
| 3 | NAS | | |
| 4 | NAS | | |

Figure 7-2 *Add Network Disk*

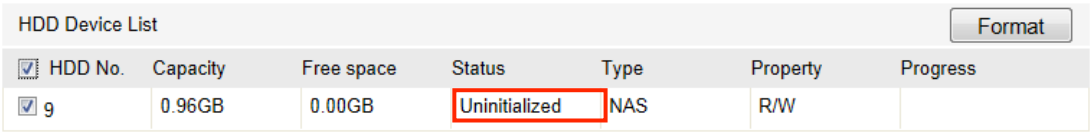
**NOTE:** The network disk file path name share is user-defined while creating the DVR network storage. Please refer to the User Manual of NAS for creating the file path.

5) Click

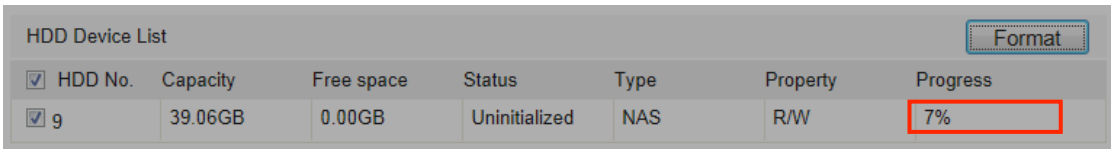
to add the network disk.

   **NOTE:** After having saved successfully, you need to reboot the speed dome to activate the settings.
6) Initialize the added network disk.
7) Enter the HDD Settings interface (**Advanced Configuration > Storage > Storage Management**), in which you can view the capacity, free space, status, type and property of the disk.
8) If the status of the disk is **Uninitialized** as shown in 0, check the corresponding checkbox to select the disk and click 

to start initializing the disk.




Initialize Disk




Initializing

When the initialization completed, the status of disk will become **Normal** as shown in Figure 7-3**.**

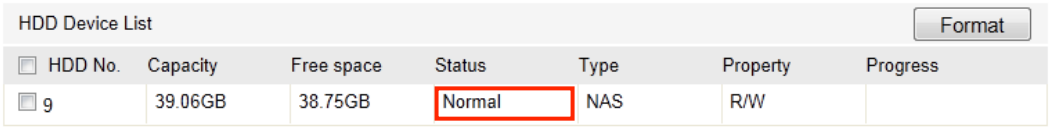



Figure 7-3 *View Disk Status*

**NOTE:**

- Up to 8 NAS disks can be connected to the speed dome.
- To initialize and use the SD card after insert it to the speed dome, please refer to the steps of NAS disk initialization.

## 7.2 Configuring Recording Schedule

***Purpose:***

There are two kinds of recording for the speed domes: manual recording and scheduled recording. For the manual recording, refer to Section ***4.4 Recording and Capturing Pictures Manually***. In this section, you can follow the instructions to configure the scheduled recording. By default, the record files of scheduled recording are stored in the SD card (if supported) or in the network disk.

***Steps:***

1) Enter the Record Schedule Settings interface:

**Configuration > Advanced Configuration> Storage > Record Schedule**

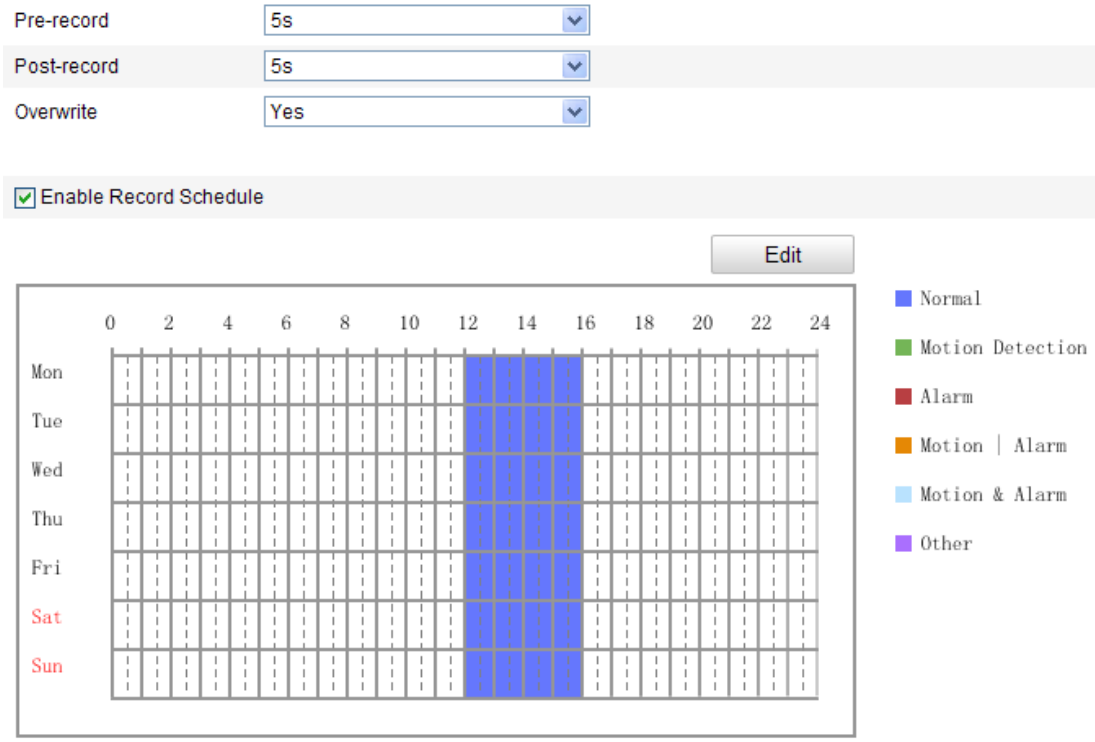



Figure 7-4 *Recording Schedule Interface*

2) Check the checkbox of **Enable Record Schedule** to enable scheduled recording.
3) Set the record parameters of the speed dome.

Record Parameters

- **Pre-record:** The time you set to start recording before the scheduled time or the event. For example, if an alarm triggers recording at 10:00, and the pre-record time is set as 5 seconds, the speed dome starts to record at 9:59:55.
- The Pre-record time can be configured as No Pre-record, 5 s, 10 s, 15 s, 20 s, 25 s, 30 s or not limited.
  **NOTE:** The pre-record time changes according to the video bitrate.
- **Post-record:** The time you set to stop recording after the scheduled time or the event. For example, if an alarm triggered recording ends at 11:00, and the post-record time is set as 5 seconds, the speed dome records until 11:00:05.
- The Post-record time can be configured as 5 s, 10 s, 30 s, 1 min, 2 min, 5 min or 10 min.
- **Overwrite**: If you enable his function and the HDD is full, the new record files overwrite the oldest record files automatically.
  **NOTE:** The Pre-record and Post-record parameters vary depending on the speed dome model.

4) Click

to edit the record schedule.

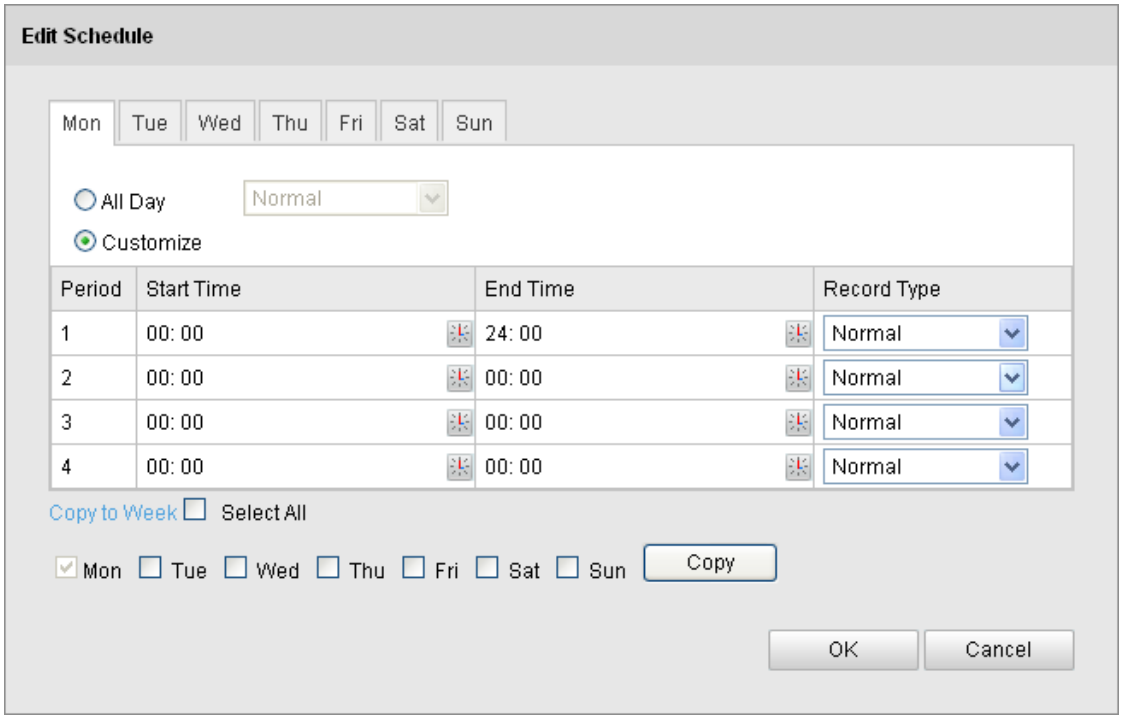



Figure 7-5 *Record Schedule*

5) Choose the day to set the record schedule.

a) Set all-day record or segment record:

- If you want to configure the all-day recording, please check the **All Day** checkbox.
- If you want to record in different time sections, check the **Customize** checkbox. Set the **Start Time** and **End Time.**

**NOTE:** The time of each segment can't be overlapped. Up to 4 segments can be configured.

b) Select a **Record Type**. The record type can be Normal, Motion Detection, Alarm, Motion | Alarm, Motion & Alarm.

- **Normal -** If you select **Normal**, the video will be recorded automatically according to the time of the schedule.
- **Record Triggered by Motion Detection -** If you select **Motion Detection**, the video will be recorded when the motion is detected.

Besides configuring the recording schedule, you have to set the motion detection area and check the checkbox of **Trigger Channel** in the **Linkage Method** of Motion Detection Settings interface. For detailed information, please refer to the *Step **1 Set the Motion Detection Area** in the* Section ***6.6.1 Configuring Motion Detection**.*

- **Record Triggered by Alarm -** If you select **Alarm**, the video will be recorded when the alarm is triggered via the external alarm input channels.

Besides configuring the recording schedule, you have to set the **Alarm Type** and check the checkbox of **Trigger Channel** in the **Linkage Method** of **Alarm Input Settings** interface. For detailed information, please refer to Section ***6.6.4 Configuring External Alarm Input***.

- **Record Triggered by Motion & Alarm -** If you select **Motion & Alarm**, the video will be recorded when the motion and alarm are triggered at the same time.

Besides configuring the recording schedule, you have to configure the settings on the **Motion Detection** and **Alarm Input Settings** interfaces. Please refer to Section ***6.6.1*** and Section ***6.6.4*** for detailed information.

- **Record Triggered by Motion | Alarm -** If you select **Motion | Alarm**, the video will be recorded when the external alarm is triggered or the motion is detected.
  Besides configuring the recording schedule, you have to configure the settings on the **Motion Detection** and **Alarm Input Settings** interfaces. Please refer to Section ***6.6.1*** and Section ***6.6.4*** for detailed information.

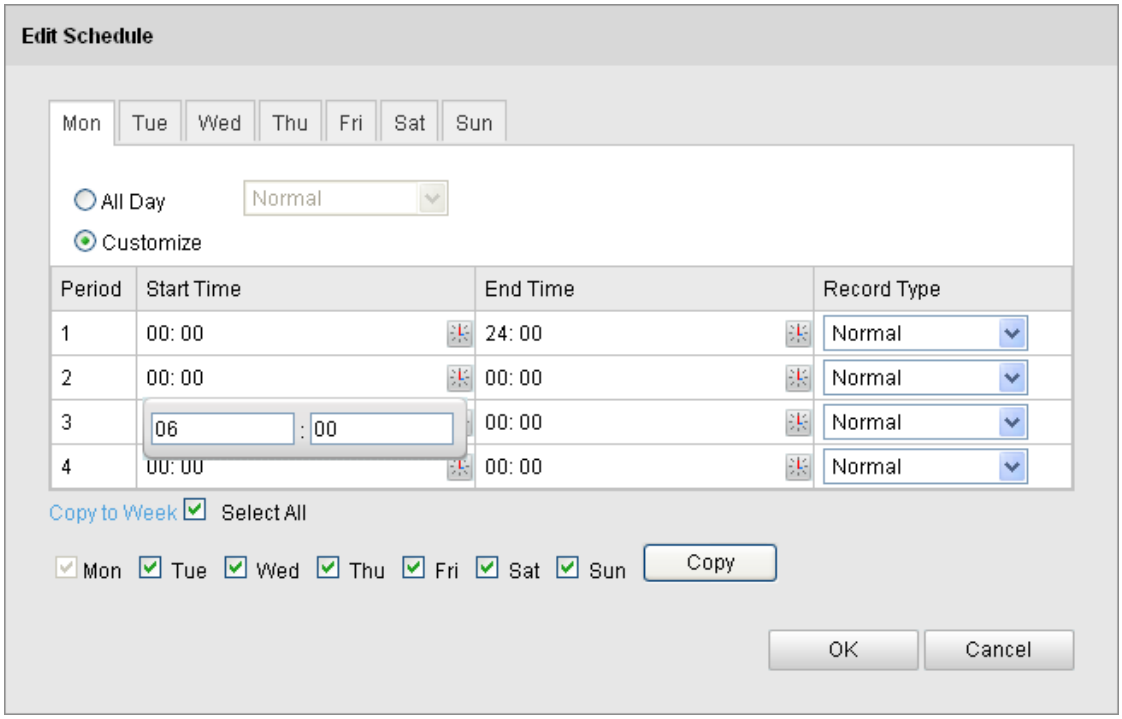



Figure 7-6 *Edit Record Schedule*

c) Check the checkbox ☐ Select All and click Copy to copy settings of this day to the whole week. You can also check any of the checkboxes before the date and click Copy.

d) Click OK to save the settings and exit the **Edit Record Schedule** interface.

6) Click Save to save the settings.

## 7.3 Configuring Snapshot Settings

***Purpose:***

You can configure the scheduled snapshot and event-triggered snapshot. You can upload the captured pictures to a FTP server.

**Basic Settings**

***Steps:***

1) Enter the Snapshot Settings interface:

2) Configuration > Advanced Configuration > Storage > Snapshot
3) Check the **Enable Timing Snapshot** checkbox to enable continuous snapshot. Check the **Enable Event-triggered Snapshot** checkbox to check event-triggered snapshot.
4) Select the quality of the snapshot.
5) Set the time interval between two snapshots.
6) Click

to save the settings.

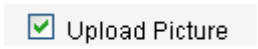
### UPLOADING TO FTP

**NOTE:** Please make sure that the FTP server is online.

You can follow below configuration instructions to upload the snapshots to FTP.

- Upload continuous snapshots to FTP

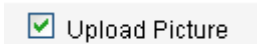
***Steps:***

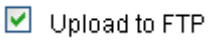
1) Configure the FTP settings and check 

checkbox in FTP Settings interface. Please refer to Section ***6.3.8 Configuring FTP Settings*** for more details to configure FTP parameters.
2) Check the **Enable Timing Snapshot** checkbox.

- Upload event-triggered snapshots to FTP

***Steps:***

1) Configure the FTP settings and check 

checkbox in FTP Settings interface. Please refer to Section ***6.3.8 Configuring FTP Settings*** for more details to configure FTP parameters.
2) Check 

checkbox in Motion Detection Settings or Alarm Input interface. Please refer to *Step* ***3 Set the Alarm Actions Taken for Motion Detection*** in Section ***6.6.1 Configuring Motion Detection***, *or Step* ***4 Configuring External Alarm Input*** in Section ***6.6.1 Configuring Motion Detection***.
3) Check the **Enable Event-triggered Snapshot** checkbox.

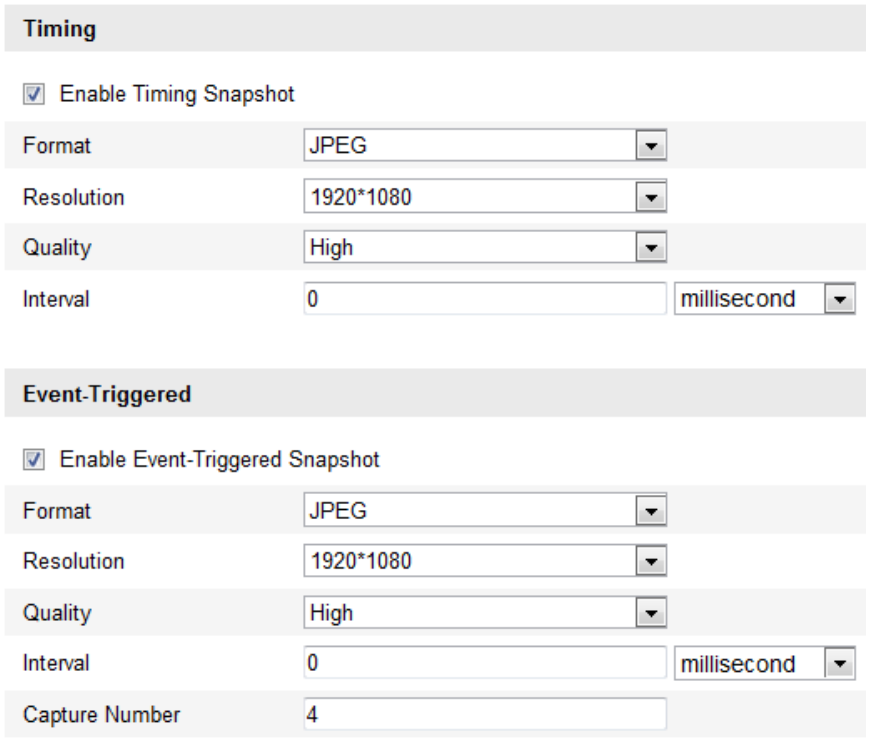



Figure 7-7 *Snapshot Settings*

# 8 Playback

***Purpose:***

This section explains how to view the remotely recorded video files stored in the network disks or SD cards.

***Task 1*: To play back the video files**

***Steps:***

1) Click Playback on the menu bar to enter playback interface.

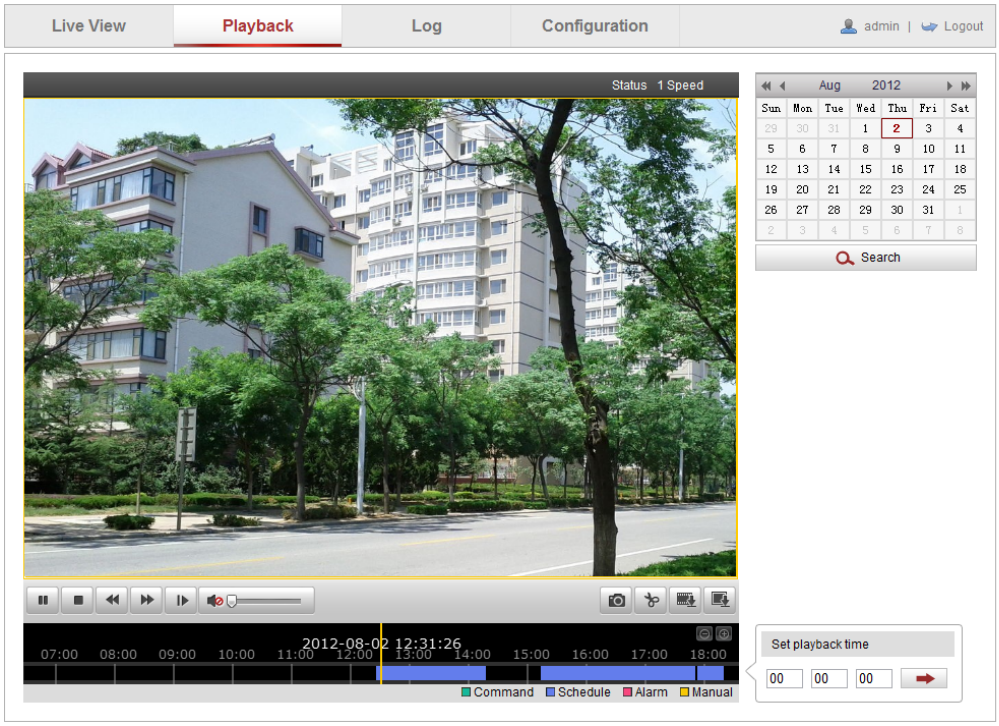



Figure 8-1 *Playback Interface*

2) Select the date and click Search.

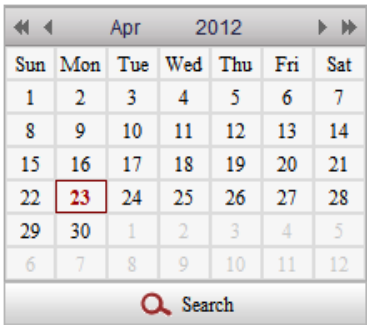



Figure 8-2 *Search Video*

3) Click to play the video files found on this date.

The toolbar on the bottom of Playback interface can be used to control playing process.

Figure 8-3 *Playback Toolbar*

Description of the buttons

| Button | Operation | Button | Operation |
|---|---|---|---|
| | Play | | Capture a picture |
| | Pause | | Start/Stop clipping video files |
| | Stop | | Audio on and adjust volume/Mute |
| | Speed down | | Download video files |
| | Speed up | | Download captured pictures |
| | Display playback status | | Playback by frame |

**NOTE:** You can choose the file paths locally for downloaded playback video files and pictures in Local Configuration interface. Please refer to Section ***6.1 Configuring Local Parameters*** for details.

Drag the progress bar with the mouse to locate the exact playback point. You can also input the time and click to locate the playback point in the **Set playback time** field. You can also click to zoom out/in the progress bar.

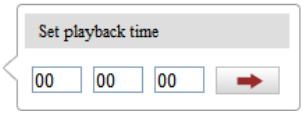



Figure 8-4 *Set Playback Time*

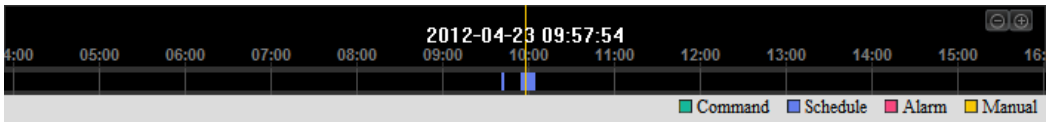



Figure 8-5 *Progress Bar*

The different colors of the video on the progress bar stand for the different video types as shown in Figure 8-6.

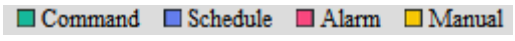



Figure 8-6 *Video Types*

***Task 2*: To download the video files**

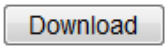
***Steps:***

1) Click on the playback interface. The pop-up menu is shown in Figure 8-7.

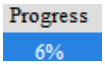
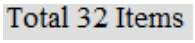
2) Set the start time and end time. Click **Search**. The corresponding video files are listed on the left.

Figure 8-7 *Video Downloading interface*

3) Check the checkbox in front of the video files that you need to download.

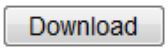
4) Click  to download the video files.

**NOTE:**

- The progress ratio  displays the downloading ratio of the video file.
- You can click to stop the downloading.
- The total number  displays the amount of the video files.
- The video files are not all listed on one page. You can click to turn pages.

***Task 3*: To download the captured pictures**

***Steps:***

1) Click on the playback interface. The pop-up menu is shown in Figure 8-8.
2) Set the linkage type of capturing the pictures as timing, alarm, motion, etc..
3) Set the start time and end time. Click **Search**. The corresponding picture files are listed on the left.
4) Check the checkbox in front of the files that you need to download.
5) Click  to download the files.

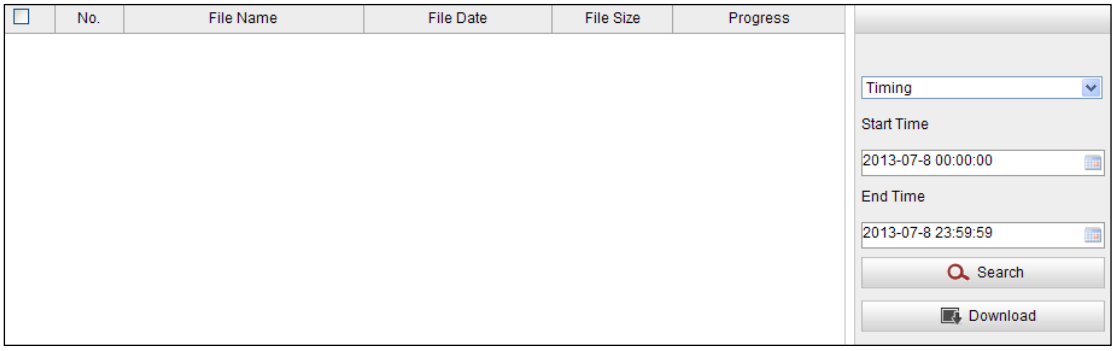



Figure 8-8 *Picture Downloading interface*

# 9 Log Searching

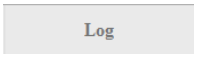
***Purpose:***

The operation, alarm, exception and information of the speed dome can be stored in log files. You can also export the log files on your demand.

***Before you start:***

Please configure network storage for the speed dome or insert a SD card in the speed dome.

***Steps:***

1) Click 

on the menu bar to enter log searching interface.

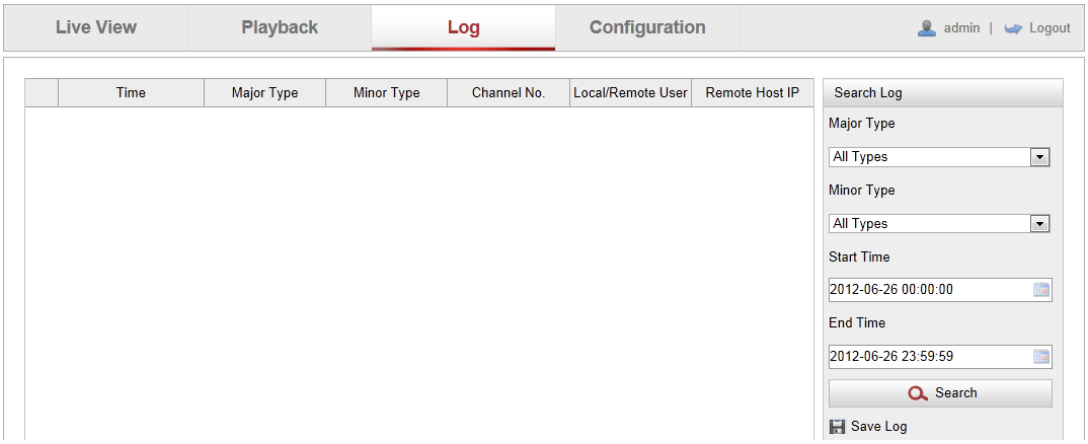



Figure 9-1 *Log Searching Interface*

2) Set the log search conditions to specify the search, including the Major Type, Minor Type, Start Time and End Time as shown in Figure 9-2.

3) Click

to search log files. The matched log files will be displayed on the **Log** interface.

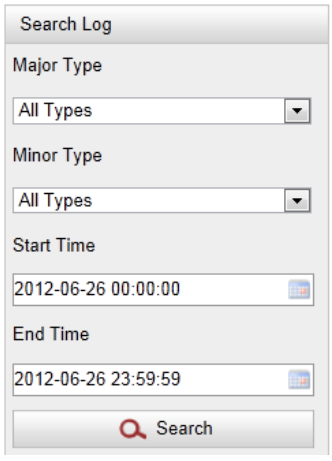
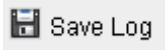



Figure 9-2 *Log Searching*

4) To export the log files, click 

to save the log files in your computer.

# 10 Others

## 10.1 Managing User Accounts

Enter the User Management interface:

**Configuration** >**Basic Configuration**> **Security** > **User**

Or **Configuration** > **Advanced Configuration**> **Security** > **User**

The **admin** user has access to create, modify or delete other accounts. Up to 32 user accounts can be created.

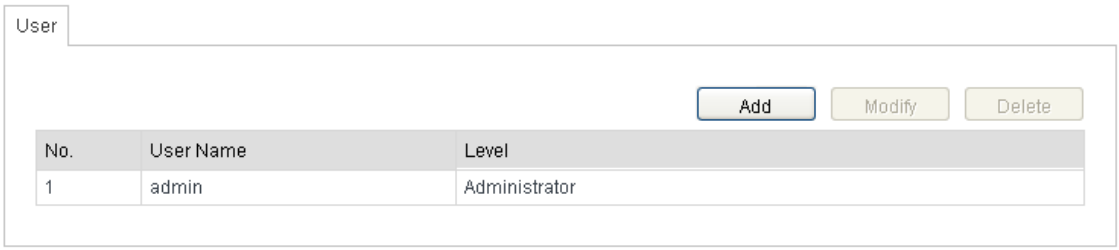



Figure 10-1 *User Information*

- Add a User

***Steps:***

1) Click Add to add a user.
2) Input the new **User Name**, select **Level** and input **Password**.
   **NOTE:** The level indicates the permissions you give to the user. You can define the user as **Operator** or **User**.
3) In the **Basic Permission** field and **Camera Configuration** field, you can check or uncheck the permissions for the new user.
4) Click OK to finish the user addition.

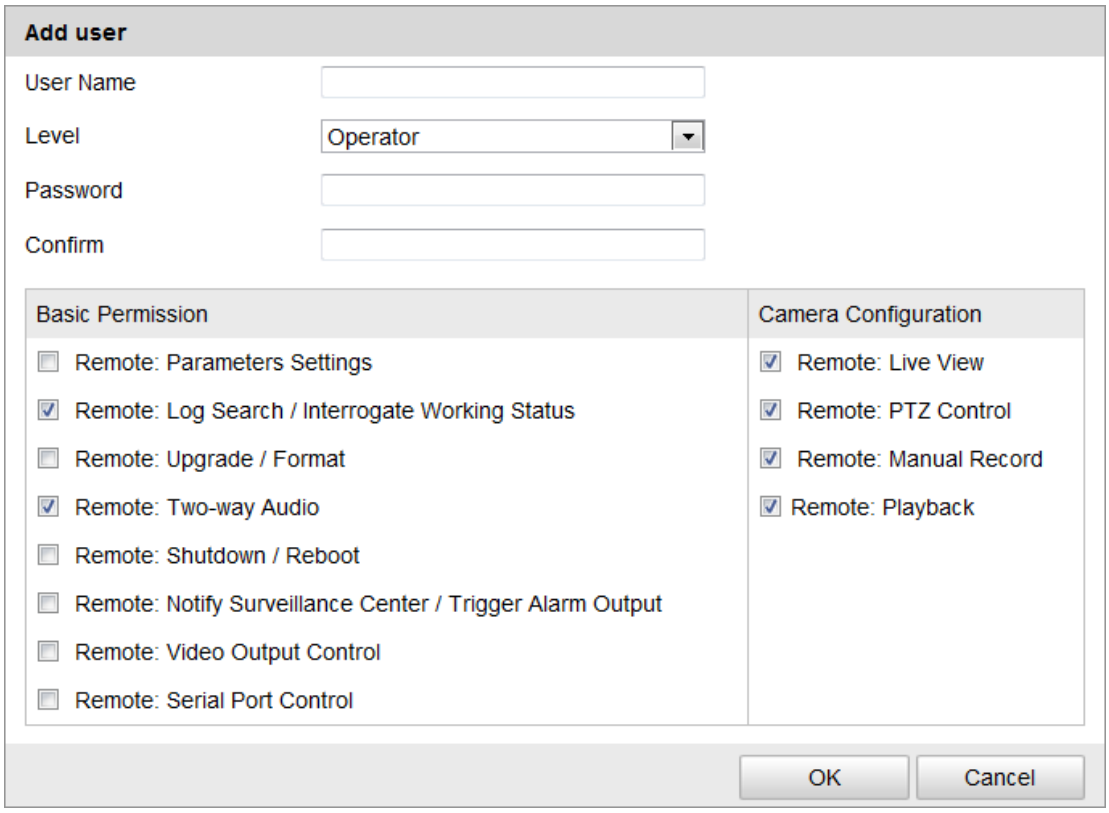



Figure 10-2 *Add a User*

- Modify a User

***Steps:***

1) Left-click to select the user from the list and click Modify.
2) Modify the **User Name**, **Level** or **Password**.
3) In the **Basic Permission** field and **Camera Configuration** field, you can check or uncheck the permissions.
4) Click OK to finish the user modification.

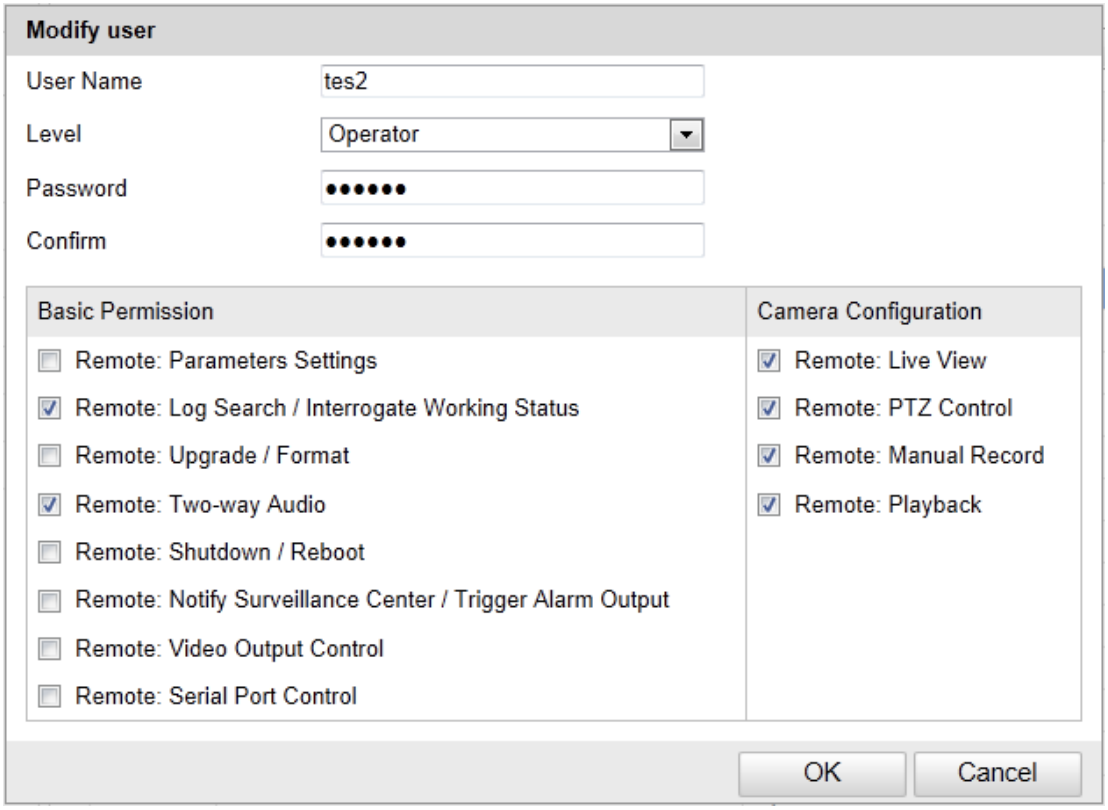



Figure 10-3 *Modify a User*

- Delete a User

***Steps:***

1) Left-click the user name you want to delete and click Delete.

2) Click OK on the pop-up dialogue box to delete the user.

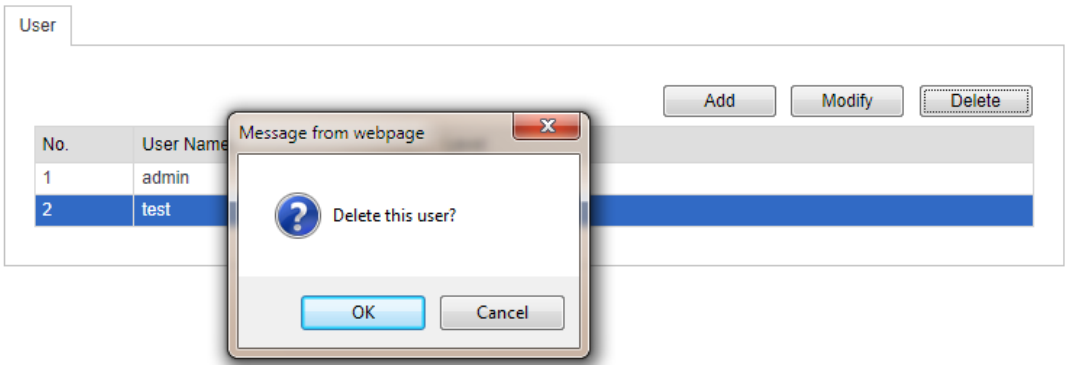



Figure 10-4 *Delete a User*

## 10.2 Configuring RTSP Authentication

***Purpose:***

You can specifically secure the stream data of live view.

***Steps:***

**1)** Enter the RTSP Authentication interface:

**Configuration**> **Advanced Configuration**> **Security** > **RTSP Authentication**

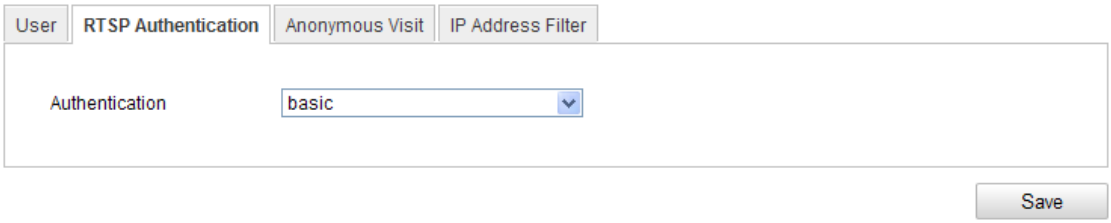



Figure 10-5 *RTSP Authentication*

2) Select the Authentication type basic or disable in the drop-down list to enable or disable the RTSP authentication.

**3)** Click Save to save the settings.

## 10.3 Configuring Anonymous Visit

When you enable this function, you can log into the camera without a username and password. In login interface, check the **Anonymous** checkbox and click **Login** to enter the camera as shown in Figure 10-7.

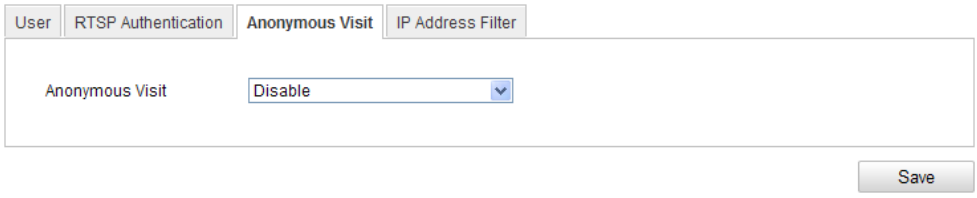



Figure 10-6 *Anonymous Login*

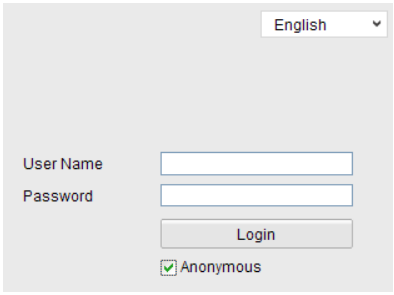



Figure 10-7 *Login Interface*

## 10.4 Configuring IP Address Filter

With this function on, the camera allows certain IP addresses whether to log in or not.

| Filter Type | Description |
|---|---|
| Forbidden | Forbid the IP addresses added in the **IP Address Filter** interface to log in. |
| Allowed | Allow only the IP addresses added in the **IP Address Filter** interface to log in. |

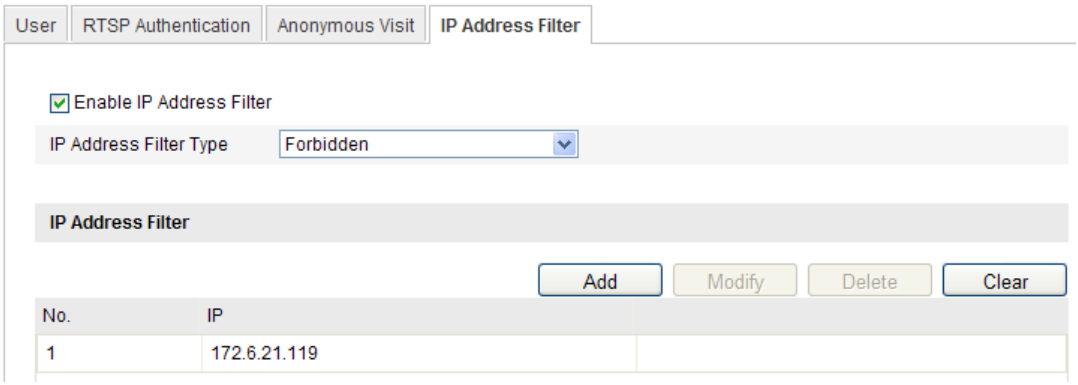



Figure 10-8 *IP Address Filter*

## 10.5 Viewing Device Information

Enter the Device Information interface:

- **Configuration** > **Basic Configuration**> **System** > **Device Information**
- Or **Configuration** > **Advanced Configuration**> **System** > **Device Information**
  - In the **Device Information** interface, you can edit the Device Name.

Other information of the network speed dome, such as Model, Serial No., Firmware Version, Encoding Version, Number of Channels, Number of HDDs, Number of Alarm Input and Number of Alarm Output are displayed. The information cannot be changed in this menu. It is the reference for maintenance or modification in future.

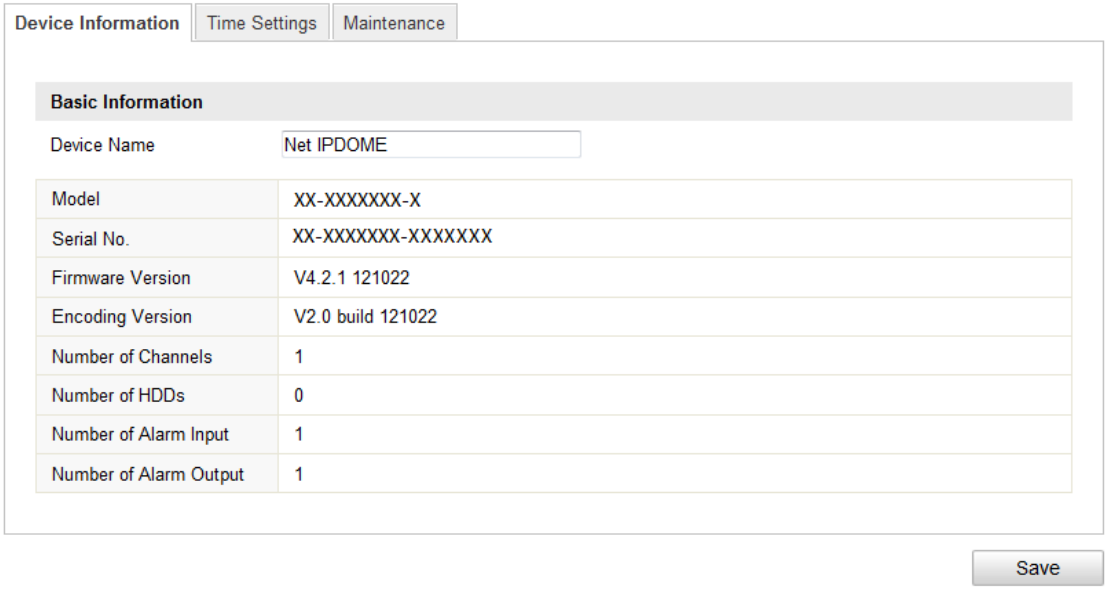



Figure 10-9 *Device Information*

## 10.6 Maintenance

### REBOOTING THE SPEED DOME

***Steps:***

1) Enter the Maintenance interface:

   **Configuration** > **Basic Configuration**> **System** > **Maintenance**

Or **Configuration** > **Advanced Configuration**> **System** > **Maintenance:**

2) Click Reboot to reboot the network speed dome.

Figure 10-10 *Reboot the Device*

## RESTORING DEFAULT SETTINGS

***Steps:***

**1)** Enter the Maintenance interface:

**Configuration** > **Basic Configuration**> **System** > **Maintenance**

Or **Configuration** > **Advanced Configuration**> **System > Maintenance**

2) Click Restore or Default to restore the default settings.

**NOTE:** Clicking Default restores all the parameters to default settings including the IP address and user information. Please use this button with caution.

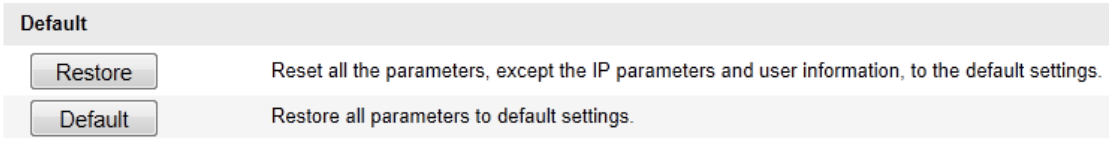

Default
Restore
Reset all the parameters, except the IP parameters and user information, to the default settings.
Default
Restore all parameters to default settings.

Figure 10-11 *Restore Default Settings*

## IMPORTING/EXPORTING CONFIGURATION FILE

***Steps:***

1) Enter the Maintenance interface:

**Configuration** > **Basic Configuration**> **System** > **Maintenance**

Or **Configuration** > **Advanced Configuration**> **System > Maintenance**

2) Click Browse to select the local configuration file and then click Import to start importing configuration file.

**NOTE:** You need to reboot the speed dome after importing configuration file.

3) Click Export and set the saving path to save the configuration file in local storage**.**

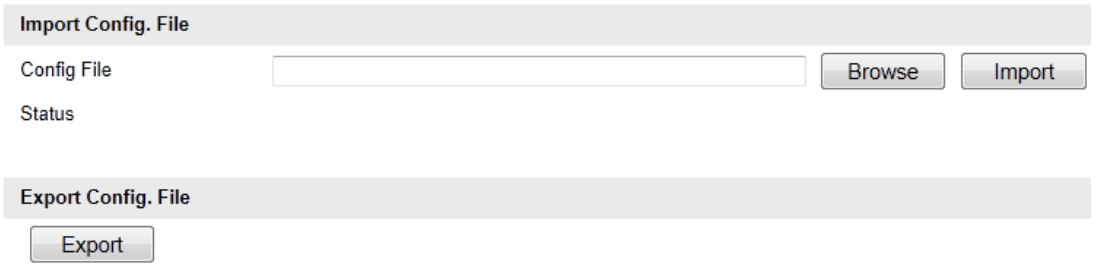


Figure 10-12 *Import/Export Configuration File*

### UPGRADING THE SYSTEM

***Steps:***

**1)** Enter the Maintenance interface:

**Configuration** > **Basic Configuration**> **System** > **Maintenance**

Or **Configuration** > **Advanced Configuration**> **System** > **Maintenance**

2) Select Firmware or Firmware Directory.

- **Firmware**: when you select **Firmware**, you need to find the firmware in your computer to upgrade the device.
- **Firmware Directory**: You need to find the directory where the firmware locates. The device can find the firmware in the directory automatically.

3) Click Browse to select the local upgrade file and then click Upgrade to start remote upgrade.

**NOTE:** The upgrading process will take 1 to 10 minutes. Please don't disconnect power of the speed dome during the process. The speed dome reboots automatically after upgrading.

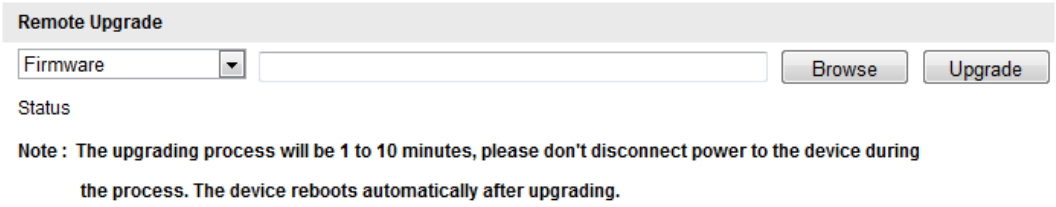

Remote Upgrade
Firmware
Browse
Upgrade
Status
Note : The upgrading process will be 1 to 10 minutes, please don't disconnect power to the device during the process. The device reboots automatically after upgrading.

Figure 10-13 *Remote Upgrade*

### ENABLING TELNET FUNCTION

Telnet is a network protocol used on the Internet or local area networks to provide a bidirectional interactive text-oriented communication facility using a virtual terminal connection. You can enable/disable this function in the following interface.

Enter the Maintenance interface:

**Configuration** > **Basic Configuration**> **System** > **Service**

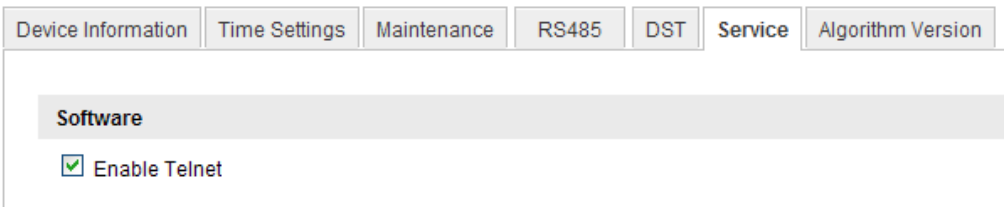



Figure 10-14 *Service*

## 10.7 RS-485 Settings

***Purpose:***

The RS-485 serial port is used to control the PTZ of the camera. The configuring of the PTZ parameters should be done before you control the PTZ unit.

***Steps:***

1) Enter RS-485 Port Setting interface:

Configuration> Advanced Configuration> System > RS485

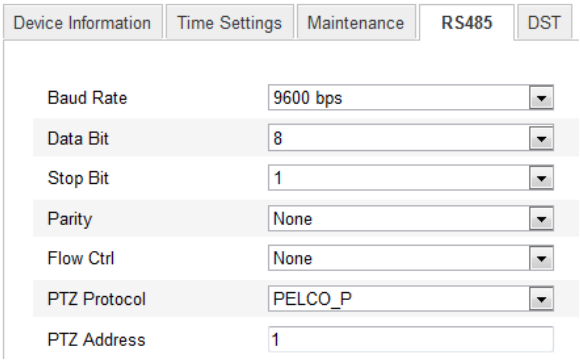



Figure 10-15 *RS-485 Settings*

2) Set the RS-485 parameters and click Save to save the settings.

By default, the Baud Rate is set as 9600 bps, the Data Bit is 8, the stop bit is 1 and the Parity and Flow Control is None.

**NOTE:** The Baud Rate, PTZ Protocol and PTZ Address parameters of the speed dome should be exactly the same as those of the remote control device.